

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
POST 2006 COMPLETION
(Tabular dollars in thousands, narrative in whole dollars)

PROGRAM MISSION

Environmental Management projects currently projected to require funding beyond FY 2006 are funded within the POST 2006 COMPLETION account. Within the Defense Environmental Restoration and Waste Management appropriation, the POST 2006 COMPLETION account includes a significant number of projects at the largest DOE sites--the Hanford site in Washington; the Savannah River site in South Carolina; the Idaho National Engineering and Environmental Laboratory in Idaho; the Oak Ridge Reservation in Tennessee--as well as, the Los Alamos National Laboratory in New Mexico; the Nevada Test Site; and the Waste Isolation Pilot Plant in Carlsbad, New Mexico. A variety of multi-site activities are funded in this account including the Defense Deposit to the D&D Fund.

After completion of cleanup, it will be necessary for EM to maintain a presence at most sites to monitor, maintain, and provide information on the contained residual contamination. These activities will be necessary to ensure that the reduction in risk to human health is maintained. Such long-term stewardship will include passive or active controls and, often, treatment of groundwater over a long period of time. The extent of long-term stewardship required at a site will reflect the end-state developed in consultation among DOE and other representatives of the Administration, Congress, Tribal Nations, representatives of regulatory agencies and state and local authorities, representatives of nongovernmental organizations, and interested members of the general public.

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PROGRAM FUNDING PROFILE

	FY 1997 Adjusted <u>Appropriation</u>	FY 1998 Adjusted <u>Appropriation</u>	FY 1999 Budget <u>Request</u>
Remedial Action/Release Sites	\$350,515	\$356,635	\$369,452
Facility Decommissioning	34,217	46,361	33,465
High-Level Waste	687,926	698,044	702,328
Transuranic Waste	250,512	232,778	242,480
Mixed Low-Level Waste	172,290	131,980	116,437
Low-Level Waste	108,276	111,341	93,337
Hazardous Waste	21,267	26,323	18,078
All Other Waste Types	85,497	82,084	71,808
Nuclear Material	17,708	14,443	24,597
Spent Nuclear Fuel	147,856	174,545	176,870
Facility Deactivation	28,203	20,485	10,255
Landlord	193,940	193,092	193,642
Long-Term Monitoring	20,612	15,557	16,507
Program Support	176,164	158,209	144,527
D&D Fund Deposit	376,648	388,000	398,088
Multi-Site	<u>94,666</u>	<u>97,010</u>	<u>61,580</u>
 TOTAL, POST 2006 COMPLETION	 <u>\$2,766,297</u>	 <u>\$2,746,887</u>	 <u>\$2,673,451</u>

POSTE 2006 COMPLETION - DEFENSE - PROGRAM FUNDING PROFILE (cont'd)

	FY 1997 Adjusted <u>Appropriation</u>	FY 1998 Adjusted <u>Appropriation</u>	FY 1999 Budget <u>Request</u>
Operations and Maintenance [non-add]	[\$2,683,379]	[\$2,683,589]	[\$2,592,195]
Construction [non-add]	[\$82,918]	[\$63,298]	[\$81,256]

Public Law Authorization:

Pub. Law 95-91, DOE Organization Act (1977)

Pub. Law 105-62, The Energy and Water Development Appropriations Act, Fiscal Year 1998

Pub. Law 105-340, National Defense Authorization Act, For Fiscal Year 1998

Pub. Law 102-579, Waste Isolation Pilot Plant Land Withdrawal Act (1992)

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PROGRAM FUNDING BY SITE

	FY 1997 Adjusted <u>Appropriation</u>	FY 1998 Adjusted <u>Appropriation</u>	FY 1999 Budget <u>Request</u>
ALBUQUERQUE OPERATIONS OFFICE			
Albuquerque Operations Office (NM)	\$0	\$1,643	\$1,470
Los Alamos National Laboratory (NM)	<u>111,637</u>	<u>128,957</u>	<u>77,867</u>
Subtotal, ALBUQUERQUE	\$111,637	\$130,600	\$79,337
CARLSBAD AREA OFFICE			
Waste Isolation Pilot Plant (NM)	<u>\$187,840</u>	<u>\$173,866</u>	<u>\$183,591</u>
Subtotal, CARLSBAD	\$187,840	\$173,866	\$183,591
IDAHO OPERATIONS OFFICE			
Idaho National Engineering and Environmental Lab (ID)	<u>\$298,609</u>	<u>\$300,109</u>	<u>\$311,191</u>
Subtotal, IDAHO	\$298,609	\$300,109	\$311,191
NEVADA OPERATIONS OFFICE			
Nevada Operations Office (NV)	\$ 9,325	\$9,469	\$7,163
Nevada Test Site (NV)	<u>63,719</u>	<u>60,126</u>	<u>66,837</u>
Subtotal, NEVADA	\$73,044	\$69,595	\$74,000

POST 2006 COMPLETION - DEFENSE - PROGRAM FUNDING BY SITE (cont'd)

	FY 1997 Adjusted <u>Appropriation</u>	FY 1998 Adjusted <u>Appropriation</u>	FY 1999 Budget <u>Request</u>
OAK RIDGE OPERATIONS OFFICE			
K-25 Site (TN)	\$11,603	\$8,444	\$8,399
Oak Ridge National Laboratory (TN)	13,331	903	0
Oak Ridge Operations Office (TN)	7,650	1,523	1,574
Oak Ridge Reservation (TN)	193,797	187,446	151,855
Y-12 Plant (TN)	<u>19,374</u>	<u>23,983</u>	<u>21,155</u>
Subtotal, OAK RIDGE	\$245,755	\$222,299	\$182,983
RICHLAND OPERATIONS OFFICE			
Hanford (WA)	<u>\$654,742</u>	<u>\$ 658,096</u>	<u>\$652,448</u>
Subtotal, RICHLAND	\$654,742	\$658,096	\$652,448
SAVANNAH RIVER OPERATIONS OFFICE			
Savannah River Site (SC)	<u>\$723,356</u>	<u>\$707,312</u>	<u>\$730,233</u>
Subtotal, SAVANNAH RIVER	\$723,356	\$707,312	\$730,233
MULTI-SITE			
Headquarters (DC)	\$49,448	\$55,604	\$30,136
Multi-Site Programs (VL)	45,218	41,406	31,444
D&D Fund Deposit	<u>376,648</u>	<u>388,000</u>	<u>398,088</u>
Subtotal, Multi-Site	\$471,314	\$485,010	\$459,668
TOTAL POST 2006 COMPLETION	<u>\$2,766,297</u>	<u>\$2,746,887</u>	<u>\$2,673,451</u>

POST 2006 COMPLETION - DEFENSE

ALBUQUERQUE

I. Mission Supporting Goals and Objectives

MISSION

The Environmental Management Program, managed through the Albuquerque Operations Office (DOE-AL), supports activities at one geographic site in one state, which is the Los Alamos National Laboratory (LANL) in New Mexico. The Albuquerque Operations Office also has oversight of the Agreement in Principle with the State of New Mexico.

2006 STRATEGY

In accordance with the Draft 2006 Plan, the Albuquerque Operations Office goal is to complete cleanup of all geographic sites under its cognizance by FY 2006, except for the cleanup of LANL, which will be complete in FY 2015. Since LANL has a continuing Defense Programs mission, EM is assuming any required surveillance and maintenance and ground water monitoring activities will be budgeted for by DOE's Defense Programs, although this agreement has not been finalized yet. As part of the re-engineering of the waste management activities EM is responsible only for legacy waste and the only legacy waste remaining for EM to deal with in this budget is for TRU waste at LANL. Thus, the cost of managing all other newly generated waste associated with activities have been budgeted in FY 1999 within the DOE Office of Defense Program's Stockpile Management program.

FY 1999 PROGRAM

The Los Alamos National Laboratory (LANL), has been involved in research and development activities related to nuclear and non-nuclear weapons components. The waste produced includes low-level, mixed, hazardous, transuranic, sanitary waste streams, and small amounts of other waste from research. The primary waste management activities include storage, treatment, and disposal of waste. The LANL encompasses over 43 square miles in northern New Mexico. The LANL conducts major programs in multiple areas, including applied research in nuclear and conventional weapons development, nuclear fission and fusion, nuclear safeguards and security, and environmental and energy research. The LANL has been designated the lead laboratory for research and development efforts to support the DOE response to Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 94-1. In this capacity, LANL provides solutions to complex-wide technical and operational issues associated with stabilization and storage of plutonium and other nuclear materials.

POST 2006 COMPLETION - DEFENSE - ALBUQUERQUE (cont'd)

I. Mission Supporting Goals and Objectives (cont'd)

FY 1999 PROGRAM (cont'd)

The vision for the LANL in the Draft 2006 Plan is to have all contaminated sites cleaned up and all legacy waste disposed of by FY 2015. LANL's goal is to complete the work-off of legacy MLLW (approximately 637 m³) by the end of FY 2004 and TRU waste by the end of FY 2015. Treatment and disposal of all newly-generated MLLW and LLW as it is generated will be funded by Defense Programs starting in FY 1999. A key Draft 2006 Plan initiative at the LANL in FY 1999 will be to retrieve approximately 4,600 m³ of waste from earth-covered storage pads and place overpacked containers into inspectable storage configurations in accordance with a State of New Mexico compliance order. The FY 1999 budget also provides for continued TRU retrieval and preparation activities at LANL in support of shipment and disposal at the Waste Isolation Pilot Plant (WIPP). Ongoing long-term surveillance and maintenance will be required for residual contamination left in place at the large material disposal areas and carryovers to ensure that migration from the sites is minimized.

The LANL is comprised of over 2,000 release sites and about 130 facilities. Through FY 1997, remediation of 1,369 release sites and decommissioning of 38 facilities were completed. The Draft 2006 Plan calls for completion of additional release sites and facilities as follows: 24 release sites and three facilities in FY 1998; and 20 release sites and one facility in FY 1999.

The LANL is also performing activities as part of the DOE Nuclear Criticality Predictability Program (NCP). This program is being carried out as the Department's response to DNFSB Recommendation 97-2 which focuses on maintenance of nuclear criticality predictability capability. The scope of the LANL tasks include activities associated with the maintenance, support, and remediation of criticality analytical methods based upon the Los Alamos Radiation Modeling Interactive Environment (LARAMIE) state-of-the-art modeling software and nuclear data. The LARAMIE system (modeling codes and data libraries) has been validated in rigorous benchmark studies and is used throughout the DOE complex for criticality safety analyses.

POST 2006 COMPLETION - DEFENSE - ALBUQUERQUE (cont'd)

I. Mission Supporting Goals and Objectives (cont'd)

FY 1999 PROGRAM (cont'd)

The FY 1999 budget reflects the transfer of funds from DOE's Office of Defense Programs to the Environmental Management (EM) program for the management of nuclear materials, including the Plutonium-Beryllium Neutron Source Recovery Program at LANL. The Neutron Source Recovery Project reduces the potential for public exposure to nuclear materials through the retrieval of excess plutonium-239 neutron sources. The program was initiated in 1979 by the Department of Energy to recover and dismantle sources owned primarily by universities and other government agencies. This completes the transfer of ownership of these materials, begun in FY 1998, at the Fernald Environmental Management Project, Idaho Chemical Processing Plant, Hanford Site, Los Alamos National Laboratory, Rocky Flats Environmental Technology Site, and the Savannah River Site. Environmental Management shall be responsible for planning, funding, and managing all activities required for the safe and secure storage of excess national security materials until removed from the sites and disposed.

COMPLIANCE DRIVERS

The DOE-AL manages, coordinates, tracks, and assists in the implementation of programs at LANL. Legal drivers at Albuquerque include the Resource Conservation and Recovery Act (RCRA), CERCLA, National Environmental Policy Act (NEPA), State laws and codes, and DOE Orders.

POST 2006 COMPLETION - DEFENSE - ALBUQUERQUE (cont'd)

II. Funding Schedule:

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Remedial Action/Release Sites	\$ 43,838	\$55,383	\$45,116	\$ -10,267	-19%
Facility Decommissioning	940	4,617	65	-4,552	-99%
Nuclear Materials Stabilization	13,888	13,958	15,560	+1,602	+11%
Transuranic Waste	15,429	19,664	13,715	-5,949	-30%
Mixed Low-Level Waste	5,718	7,332	3,411	-3,921	-53%
Low-Level Waste	6,386	7,396	0	-7,396	-100%
Hazardous Waste	6,324	6,498	0	-6,498	-100%
Other Waste	12,396	10,248	0	-10,248	-100%
Program Support	<u>6,718</u>	<u>5,504</u>	<u>1,470</u>	<u>-4,034</u>	<u>-73%</u>
 TOTAL, Albuquerque	 <u>\$111,637</u>	 <u>\$130,600</u>	 <u>\$79,337</u>	 <u>\$-51,263</u>	 <u>-39%</u>

III. Performance Summary - Accomplishments:

[PBS Numbers are Bracketed in the Text]

FY 1997 **FY 1998** **FY 1999**

Remedial Action/Release Sites

Carry out assessments at LANL including site investigations, Corrective Measures Studies, RCRA Facility Investigation (RFI) fieldwork, and preparation of RFI reports. Activities vary from site to site and no further action determinations make the funding fluctuate. [AL009; AL010; AL011]

\$21,457 \$20,681 \$19,846

- In FY 1997, assessment activities were completed at 151 simple release sites.
- In FY 1998, assessment activities will be completed at 71 complex and simple release sites.
- In FY 1999, assessment activities will be completed at 34 complex release sites.

POST 2006 COMPLETION - DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Conduct site remedial actions at LANL [AL009; AL010; AL011]	\$22,381	\$34,702	\$25,270
<ul style="list-style-type: none"> • In FY 1997, remediation was completed at 158 simple release sites. • In FY 1998, remediation will be completed at 24 complex release sites. • In FY 1999, remediation will be completed at 20 complex release sites. 			
Subtotal, Remedial Action/Release Sites	<u>\$ 43,838</u>	<u>\$ 55,383</u>	<u>\$ 45,116</u>
<u>Facility Decommissioning</u>			
Facility decommissioning at the LANL site. [AL009]	\$940	\$4,617	\$65
<ul style="list-style-type: none"> • In FY 1997, decommissioning was completed at seven structures; the majority of the funding is in the Non-Defense Appropriation. • In FY 1998, decommissioning of three structures. • In FY 1999, decommissioning of one structure and continue decommissioning of one other structure. 			
Subtotal, Facility Decommissioning	<u>\$ 940</u>	<u>\$ 4,617</u>	<u>\$ 65</u>
<u>Nuclear Materials Stabilization</u>			
Stabilization Research and Development (R&D) [AL008]	\$13,838	\$13,158	\$13,010
<ul style="list-style-type: none"> • In FY 1997, completed R&D programs to define standards, procedures, and methods for plutonium storage, packaging, surveillance and monitoring. Verified capability of salt distillation on a full scale and ability to meet Rocky Flats requirements. 			

POST 2006 COMPLETION - DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Nuclear Materials Stabilization</u> (cont'd)			
<ul style="list-style-type: none"> In FY 1998, design and test production salt distillation unit for incorporation at Rocky Flats. Deliver to Hanford pyrolysis of polycubes with silent discharge plasma. Deliver to Rocky Flats process for low temperature vitrification agglomeration of ash-bearing residues. In FY 1999, support all sites in implementing additional technologies, such as salt distillation installation at Rocky Flats. Continue R&D on stabilization process alternatives for plutonium-bearing combustibles and ash. Stabilization technology development, technology transfer, and implementation support activities begin to ramp down in FY 2002, provided that the sites successfully meet 94-1 stabilization milestones. Shelf-life studies, surveillance, core technology, and EM Nuclear Materials Stewardship functions will continue as long as EM retains custody of nuclear materials. 			
<ul style="list-style-type: none"> In FY 1998 and FY 1999, the EM Nuclear Materials Stabilization and Stewardship (NMSS) activity was created in response to a recognized need to leverage field expertise in the stewardship area. [AL-008] 	\$50	\$800	\$800
<ul style="list-style-type: none"> In FY 1999, the Neutron Source Recovery Project at LANL will provide for the shipping, receiving, accountability, interim storage, and processing of 85 to 100 plutonium-239/beryllium neutron sources. Because of the stringent requirements for shipping nuclear materials, Los Alamos personnel work closely with the shippers to ensure compliance with all regulations. The dismantlement and recovery process involves the removal of source cladding and the chemical separation of the source materials to eliminate neutron emissions. 	\$0	\$0	\$1,750
Subtotal, Nuclear Materials Stabilization	\$ 13,888	\$ 13,958	\$ 15,560

POST 2006 COMPLETION - DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Transuranic Waste</u>			
Provides for the treatment, storage and disposal (starting in FY 1998) at WIPP of transuranic waste at LANL. Includes the retrieval of LANL TRU presently in non-compliant storage under earthen cover. Fifty-two percent of the TRU in non-compliant storage will be retrieved through FY 1999. [AL-012, AL-013]	\$15,429	\$19,664	\$13,715
<ul style="list-style-type: none">• In FY 1997, retrieved 383 m³ of earth covered TRU waste from Pad I and obtained Carlsbad Area Office (CAO) certification authority at LANL.• In FY 1998, continue retrieval operations, characterize/certify and dispose of legacy TRU waste and ship to WIPP. Increased funding provided equipment to facilitate TRU packaging for shipments to WIPP.• In FY 1999, continue retrieval operations, characterize/certify legacy TRU waste and repackage for shipment to WIPP. Responsibility and funding for newly generated TRU waste is transferred to Defense Programs in FY 1999 under the re-engineering initiative.			
Treatment			
<ul style="list-style-type: none">• In FY 1997, 0 cubic meters was treated.• In FY 1998, 150 cubic meters will be treated.• In FY 1999, 150 cubic meters will be treated.			
Storage			
<ul style="list-style-type: none">• In FY 1997, 8,785 cubic meters was stored.• In FY 1998, 8,779 cubic meters will be stored.• In FY 1999, 8,883 cubic meters will be stored.			

POST 2006 COMPLETION - DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Transuranic Waste</u> (cont'd)			
Disposal			
• In FY 1997, 0 cubic meters was disposed.			
• In FY 1998, 6 cubic meters will be disposed. (Approximately 50 m ³ as received at WIPP.)			
• In FY 1999, 67 cubic meters will be disposed.			
Subtotal, Transuranic Waste	\$ 15,429	\$ 19,664	\$ 13,715
<u>Mixed Low-Level Waste</u>			
Provides for the characterization, treatment, and disposal of mixed low-level waste under terms of Federal Facility Compliance Order at LANL. Progress will be made toward work-off of all legacy MLLW by FY 2006. [AL012, AL013]	\$5,718	\$7,332	\$3,411
• In FY 1997, continued treatment and disposal at all sites.			
• In FY 1998, continue treatment and disposal at all sites, initiate treatment of new LANL waste streams.			
• In FY 1999, Responsibility and funding for newly generated MLLW is transferred to Defense Programs in FY 1999 under the re-engineering initiative.			
Treatment			
• In FY 1997, 235 cubic meters was treated.			
• In FY 1998, 89 cubic meters will be treated.			
• In FY 1999, 75 cubic meters will be treated.			
Storage			
• In FY 1997, 489 cubic meters was stored.			
• In FY 1998, 516 cubic meters will be stored.			
• In FY 1999, 516 cubic meters will be stored.			

POST 2006 COMPLETION - DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Mixed Low-Level Waste</u> (cont'd)			
Disposal			
• In FY 1997, 69 cubic meters was disposed.			
• In FY 1998, 89 cubic meters will be disposed.			
• In FY 1999, 75 cubic meters will be disposed.			
Subtotal, Mixed Low-Level Waste	\$ 5,718	\$ 7,332	\$ 3,411
<u>Low-Level Waste</u>			
Provides for the compliant treatment, storage, and disposal of LANL LLW at DOE and commercial disposal sites. [AL012]	\$6,386	\$7,396	\$0
• In FY 1997, continued treatment, storage and disposal.			
• In FY 1998, continue treatment, storage and disposal.			
• In FY 1999, responsibility and funding for this activity is transferred in FY 1999 to DOE's Defense Programs, under the re-engineering initiative.			
Treatment			
• In FY 1997, 0 cubic meters were treated.			
• In FY 1998, 0 cubic meters will be treated.			
Storage			
• In FY 1997, 0 cubic meters were stored.			
• In FY 1998, 0 cubic meters will be stored.			

POST 2006 COMPLETION - DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Low-Level Waste</u> (cont'd)			
Disposal			
• In FY 1997, 3,790 cubic meters were disposed.			
• In FY 1998, 5,541 cubic meters will be disposed.			
Subtotal, Low-Level Waste	<u>\$ 6,386</u>	<u>\$ 7,396</u>	<u>\$ 0</u>
<u>Hazardous Waste</u>			
Provides for the RCRA compliant treatment, storage, and disposal of LANL hazardous waste. [AL012]	\$6,324	\$6,498	\$0
• In FY 1997, treated, stored, and disposed of 1,361 metric tons.			
• In FY 1998, plan to treat, store, and dispose of 988 metric tons.			
• In FY 1999, responsibility and funding for this activity is transferred to DOE's Defense Programs, under the re-engineering initiative.			
Subtotal, Hazardous Waste	<u>\$ 6,324</u>	<u>\$ 6,498</u>	<u>\$ 0</u>
<u>Other Waste</u>			
Provides funding for LANL wastewater treatment facility upgrades, treatment of LANL liquid low-level radioactive wastes. [AL012]	\$12,396	\$10,248	\$0
• In FY 1997, treatment for LANL liquid wastes and upgrades for wastewater treatment facility.			
• In FY 1998, continue treatment of LANL liquid wastes and upgrades for wastewater treatment facility.			

POST 2006 COMPLETION - DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Other Waste</u> (cont'd)			
<ul style="list-style-type: none"> In FY 1999, responsibility and funding for this activity is transferred in FY 1999 to Defense Programs under the re-engineering initiative. 			
Subtotal, Other Waste	\$ 12,396	\$ 10,248	\$ 0
<u>Program Support</u>			
Provide for program support functions and Nuclear Criticality Predictability efforts.	\$6,718	\$5,504	\$1,470
<ul style="list-style-type: none"> In FY 1997, provide essential management oversight including site advisory boards and support activities for the compliant storage, treatment, and disposal of wastes; Provide funding for the New Mexico Agreement-in-Principle; LARAMIE code will be maintained; MCNP three-dimensional modeling code Version 4B will be released; and status of fission product cross sections will be reviewed. In FY 1998, provide essential management oversight including site advisory boards and support activities for the compliant storage, treatment, and disposal of wastes; Provide funding for the New Mexico Agreement-in-Principle; Beta version of Juntine Graphical-User-Interface will be released to criticality community; and PC version of DANTSYS three-dimensional modeling code will be released. 			

POST 2006 COMPLETION - DEFENSE - ALBUQUERQUE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Program Support</u> (cont'd)			
<ul style="list-style-type: none"> In FY 1999, provide essential management oversight including site advisory boards and support activities for the compliant storage, treatment, and disposal of wastes; Provide funding for the New Mexico Agreement-in-Principle; electronic LARAMIE criticality user network will be established; improved thermal scattering treatment and data will be developed for MCNP; and spectral indices will be added to NCNP and DANTSYS. 			
Subtotal, Program Support	<u>\$ 6,718</u>	<u>\$ 5,504</u>	<u>\$ 1,470</u>
TOTAL, ALBUQUERQUE	<u>\$111,637</u>	<u>\$130,600</u>	<u>\$79,337</u>

POST 2006 COMPLETION - DEFENSE - ALBUQUERQUE (cont'd)

Explanation of Funding Changes From FY 1998 to FY 1999:

<u>Remedial Action/Release Sites:</u> Decrease due to overall reduction in funding as work is completed: LANL will perform fewer assessments and clean ups; however, they are progressing towards assessing and remediating their more complex areas of contamination.	-\$10,267
<u>Facility Decommissioning:</u> No completions can be achieved with this significant reduction in funding. Minimal activity will be supported.	-\$4,552
<u>Nuclear Materials Stabilization:</u> There will be a reduction in R&D work, new work scope for nuclear materials stewardship and plutonium/beryllium is being funded.	+\$1,602
<u>Transuranic Waste:</u> There will be a decrease in the quantity of legacy waste to be treated, stored, and disposed.	-\$5,949
<u>Mixed Low-Level Waste:</u> Part of this work will be transferred to DOE's Defense Programs for management and funding.	-\$3,921
<u>Low-Level Waste:</u> Decrease due to transfer to Defense Programs.	-\$7,396
<u>Hazardous Waste:</u> Decrease due to transfer to Defense Programs.	-\$6,498
<u>Other Waste :</u> Decrease due to transfer to Defense Programs.	-\$10,248
<u>Program Support:</u> Some of the decrease is due to shift in responsibilities for waste activities to Defense Programs. There will be minimal funding available to support the New Mexico Agreement in Principle and increased support for the Nuclear Criticality Predictability Program.	-\$4,034
Total Funding Change, Albuquerque	<u>-\$51,263</u>

POST 2006 COMPLETION - DEFENSE

CARLSBAD AREA OFFICE

I. Mission Supporting Goals and Objectives:

MISSION

Transuranic (TRU) waste is a by-product of the nation's nuclear weapons research, development, production, and decommissioning activities. Originally, TRU waste was buried as low level waste (LLW) in the Department of Energy (DOE) constructed landfills. Since 1970, however, TRU waste has been placed in retrievable storage pending the completion and opening of a geologic disposal facility. The Waste Isolation Pilot Plant (WIPP) was authorized by Congress in 1979 (Public Law 96-164) as a research project to prove the feasibility of a deep geological disposal for TRU waste to protect human health and the environment. The facility is located in southeastern New Mexico near Carlsbad, 2,150 feet (655 meters) underground in bedded salt. The bedded salt where TRU waste will be disposed has been stable for over 225 million years, and, through extensive computer modeling and experiments, DOE believes the salt will remain stable for the next 10,000 years. This position has been supported by the National Research Council in their report titled "*Waste Isolation Pilot Plant, A Potential Solution for the Disposal for Transuranic Waste, October 1996.*" The 35-year Disposal Phase will be followed by a decommissioning phase to prepare the repository for permanent closure. In October 1992, Congress passed the WIPP Land Withdrawal Act (Public Law 102-579), which permanently transferred public lands to DOE and defined the total capacity of WIPP to be 175,600 cubic meters of TRU waste. Since October 1993, DOE has focused on activities directly related to legislative prerequisites and demonstration of compliance with long-term disposal and Resource Conservation and Recovery Act regulations in order to reach a disposal decision. In September 1996, the WIPP Land Withdrawal Act was amended deleting duplication in regulatory compliance and streamlining provisions of the Act. The Act, as amended, also authorizes DOE to annually provide \$20,000,000 plus an annual inflation increase, for 14 years to the State of New Mexico for economic assistance. On October 30, 1997, EPA issued a proposed rulemaking to certify that WIPP will comply with the EPA radioactive waste disposal regulations. Following the public comment period and public hearings, EPA is expected to issue the final rule in the Spring of 1998. The WIPP disposal operations are scheduled to begin in May 1998.

POST 2006 COMPLETION - DEFENSE - CARLSBAD (cont'd)

I. Mission Supporting Goals and Objectives:

2006 STRATEGY

The WIPP startup is a key element in the EM strategy for disposal of TRU Waste within the DOE complex. Many of the Federal Facility Compliance Act (FFCA) consent orders and agreements between the State, agencies, and the TRU waste sites are based on the assumption that WIPP will receive the waste. The Department of Energy expects to complete all near-term transuranic waste milestones in the Idaho Settlement Agreement, including shipping 3,100 cubic meters of transuranic waste from the Idaho National Engineering and Environmental Laboratory (INEEL) to WIPP by December 31, 2002. By FY 2006, WIPP expects to dispose of approximately 42,000 cubic meters of contact-handled transuranic waste and approximately 1,400 cubic meters of remote-handled transuranic waste. All transuranic waste at the Rocky Flats Environmental Technology Site (RFETS), the Nevada Test Site, Mound, and selected small quantity sites will also have been disposed. The total volumes disposed by FY 2006 represent 41 percent of the current inventory of 107,000 cubic meters of TRU waste now stored at the sites, and 25 percent of the total estimated TRU waste inventory of 175,600 cubic meters that may ultimately be disposed at WIPP. During the planned 35-year disposal phase which ends in FY 2033, waste will be received from 10 major sites and 15 small quantity sites. The disposal phase is followed by a five-year decommissioning and dismantlement phase ending in FY 2038. The planned end state for WIPP is to have all qualified DOE TRU waste disposed and to decommission and dismantle all surface facilities at the WIPP site. Life cycle costs in FY 1998 dollars for the period FY 1997-2006 are \$1,800,000,000 and post FY 2006 costs are expected to be \$5,300,000,000. The key risk reduction factor that is addressed by the WIPP facility is the elimination of potential hazards to the public, workers and environment by permanently disposing transuranic waste in a deep underground repository. The Privatization Appropriation for FY 1998 includes \$21,000,000 for capital equipment for the TRUPACT II containers necessary to fully implement the Contact-Handled transuranic waste transportation system. The Privatization program request for FY 1999, includes \$19,600,000 to develop and fabricate the 72B cask, which will be used to transport Remote-Handled transuranic waste by the selected privatized contractor. These two privatization projects are expected to save over \$290,000,000 in WIPP-related funding requirements over the next 35 years.

POST 2006 COMPLETION - DEFENSE - CARLSBAD (cont'd)

I. Mission Supporting Goals and Objectives:

FY 1999 PROGRAM

The WIPP Program expects to contribute to meeting its 2006 Plan goal by ramping up to a receipt rate of 10 to 12 contact-handled transuranic waste shipments per week by the end of FY 1999 and 17 shipments per week by the end of FY 2000. The number of shipments will increase from a range of 44 to 67 in FY 1998 to a range of 266 to 500 in FY 1999. The volume of TRU waste disposed will increase from a range of 388 to 592 cubic meters in FY 1998 to a range of 1,900 to 3,800 cubic meters in FY 1999. In addition to continued shipments of waste from INEEL, Los Alamos National Laboratory (LANL), and RFETS, WIPP will begin receiving contact-handled transuranic waste from the Savannah River Site (SRS), Hanford, Mound, Argonne National Laboratory-East (ANL-E), and selected small quantity sites. The WIPP will initiate modification of the remote-handled transuranic waste receiving system and equipment to achieve full operational status by FY 2003, and will initiate underground mining of the next set of seven waste disposal rooms (Panel 2). The facility is also relying on privatization of contact-handled and remote-handled transuranic waste transportation services to reduce costs. There are no additional major projects planned for the WIPP site. Future construction needs will be covered under General Plant Project funding.

The WIPP program funds a wide variety of institutional programs that provide economic impact assistance and operational oversight. Institutional support includes \$20,600,000 for New Mexico Impact Assistance, and provides additional funding for other activities such as the Carlsbad Environmental Research and Monitoring Center, Western Governors' Association, Environmental Evaluation Group, cooperative agreements with Indian Tribes, Southern States Energy Board, New Mexico Emergency Response, and others. Funding for these activities totals \$32,200,000 in FY 1999. Prior year funding was \$35,300,000 in FY 1998 (including \$3,000,000 for the Santa Fe relief route), and \$31,000,000 in FY 1997.

COMPLIANCE DRIVER

In FY 1999, WIPP will be in compliance with all Federal and state regulations. The facility startup and continued operation is required for other generator sites in the DOE complex to meet state compliance agreements such as the Idaho Settlement Agreement and the Rocky Flats Cleanup Agreement. The FY 1999 budget request for the WIPP facility is in compliance with Executive Order 12088.

POST 2006 COMPLETION - DEFENSE - CARLSBAD (cont'd)

II. Funding Schedule:

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
WIPP Base Operations	\$ 99,885	\$98,508	\$101,494	+2,986	+3%
Disposal Phase Certification/Exp Prog. . .	46,113	38,678	36,466	-2,212	-6%
Transportation	14,196	11,982	23,734	+11,752	+98%
TRU Waste Sites Integration & Prep. . . .	26,894	24,522	21,897	-2,625	-11%
Construction	<u>752</u>	<u>176</u>	<u>0</u>	<u>-176</u>	<u>-100%</u>
 TOTAL, Carlsbad Area Office	 <u>\$187,840</u>	 <u>\$173,866</u>	 <u>\$183,591</u>	 <u>+9,725</u>	 <u>+6%</u>

III. Performance Summary - Accomplishments:

[PBS Numbers are Bracketed in the Text]

FY 1997 FY 1998 FY 1999

Transuranic Waste

WIPP Base Operations [CAO-1] \$99,885 \$98,508 \$101,494

- In FY 1997:
 - Provided base facility activities, including environmental, health and safety, surface and underground maintenance, and support for stakeholder programs, including \$20 million for the State of New Mexico impact assistance.
 - Submitted the Compliance Certification Application to EPA in October.
 - Completed the Disposal Phase Supplemental Environmental Impact Statement in September.
- In FY 1998:
 - Declare WIPP site operational readiness in March.
 - Receive EPA decision on WIPP compliance with disposal regulations in April.
 - Secretary of Energy decision on WIPP operation as a disposal facility in April.
 - DOE notifies State and Indian tribes of intent to transport TRU waste to WIPP in April.

POST 2006 COMPLETION - DEFENSE - CARLSBAD (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Transuranic Waste</u> (cont'd)			
WIPP Base Operations [CAO-1] (cont'd)			
• In FY 1998: (cont'd)			
- Initiate contact-handled TRU waste disposal at WIPP at rate of 5 shipments per week in May.			
- Will receive a range of 44 to 67 TRU waste shipments (a range of 388 to 592 cubic meters) from INEEL, RFETS, and LANL by September.			
- Receive RCRA Part B permit from the State of New Mexico.			
- Provide \$20 million for the State of New Mexico Impact Assistance.			
• In FY 1999:			
- Begin receiving waste from SRS, Hanford, ANL-E, Mound, and selected small quantity sites.			
- The number of TRU waste shipments will increase from a range of 44 to 67 in FY 1998 to a range of 266 to 500 in FY 1999 (a range of 1,900 to 3,800 cubic meters).			
- Initiate modification of the Remote Handled Waste Receiving System and equipment to achieve full operational status by FY 2003.			
- Initiate Panel 2 mining.			
- Provide \$20.6 million for the State of New Mexico Impact Assistance.			
Disposal Phase Certification/Experimental Program [CAO-2]	\$46,113	\$38,678	\$36,466
• In FY 1997:			
- Prepared technical documentation to support submittal of the Compliance Certification Application to EPA in October 1996.			
- Continue Actinide Source Term tests at LANL and Gas Generation tests at ANL-W/INEEL in support of EPA recertification.			

POST 2006 COMPLETION - DEFENSE - CARLSBAD (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Transuranic Waste</u> (cont'd)			
Disposal Phase Certification/Experimental Program [CAO-2] (cont'd)			
• In FY 1998:			
- Provide technical support for the EPA rulemaking process.			
- Continue to develop and maintain an up-to-date performance assessment capability to support WIPP recertification in FY 2003.			
- Continue Actinide Source Term tests at LANL and Gas Generation tests at ANL-W/INEEL in support of EPA recertification.			
• In FY 1999:			
- Continue to develop and maintain an up-to-date performance assessment capability to support WIPP recertification in FY 2003.			
- Conduct monitoring, confirmatory testing, and experimental activities to support WIPP recertification in FY 2003.			
- Continue Actinide Source Term tests at LANL and Gas Generation tests at ANL-W/INEEL in support of EPA recertification.			
Transportation [CAO-3]	\$14,196	\$11,982	\$23,734
• In FY 1997:			
- Prepared Contact-Handled Transuranic Waste Transportation Services Request for Proposal by September.			

POST 2006 COMPLETION - DEFENSE - CARLSBAD (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Transuranic Waste</u> (cont'd)			
Transportation [CAO-3] (cont'd)			
• In FY 1998:			
- Contact-Handled Transuranic Waste Transportation Services contract awarded by March.			
- Provide transportation services for the shipment to WIPP of Contact-Handled TRU waste from INEEL, LANL, and RFETS.			
- Provide \$3,000,000 for the State of New Mexico Santa Fe relief route.			
• In FY 1999:			
- Provide transportation services for the shipment to WIPP of Contact-Handled TRU waste from INEEL, LANL, RFETS, SRS, Hanford, ANL-E, Mound, and selected small quantity sites.			
TRU Waste Sites Integration and Preparation [CAO-4]	\$26,894	\$24,522	\$21,897
• In FY 1997:			
- Certified LANL TRU waste characterization program in September.			
- Completed the Disposal Phase Supplemental Environmental Impact Statement in September.			
• In FY 1998:			
- Complete and issue the Disposal Phase Supplemental Environmental Impact Statement Record of Decision in January.			
- Continue quality assurance and waste certification audit activities to certify TRU waste sites for TRU waste shipment to WIPP.			

POST 2006 COMPLETION - DEFENSE - CARLSBAD (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Transuranic Waste</u> (cont'd)			
TRU Waste Sites Integration and Preparation [CAO-4] (cont'd)			
• In FY 1999:			
- Continue quality assurance and waste certification audit activities to certify TRU waste shipments to WIPP.			
- Continue Remote-Handled integration activities to ensure receipt of Remote-Handled waste by FY 2003.			
The following performance metrics apply to Carlsbad.			
Treatment			
• In FY 1997, none.			
• In FY 1998, none.			
• In FY 1999, none.			
Storage			
• In FY 1997, none.			
• In FY 1998, none.			
• In FY 1999, none.			
Disposal			
• In FY 1997, none.			
• In FY 1998, between 388 and 592 cubic meters of Contact-Handled TRU waste.			
• In FY 1999, between 1,900 and 3,800 cubic meters of Contact-Handled TRU waste.			
Subtotal, Transuranic Waste	\$187,088	\$173,690	\$183,591

POST 2006 COMPLETION - DEFENSE - CARLSBAD (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Transuranic Waste</u> (cont'd)			
Construction [CAO-1]	\$752	\$176	\$0
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Continued construction on line-item project to Install Permanent Electrical Service for the WIPP (Project No.95-D-402), which augments the existing single-feed transmission line with a second, independent power line and new electrical substation. • In FY 1998: <ul style="list-style-type: none"> - Complete Line-Item Project No. 95-D-402 to Install Permanent Electrical Service for WIPP to meet WIPP's future power requirements. • In FY 1999: <ul style="list-style-type: none"> - No new construction activities. 			
Subtotal, Construction	<u>\$752</u>	<u>\$176</u>	<u>\$ 0</u>
TOTAL, CARLSBAD AREA OFFICE	<u>\$187,840</u>	<u>\$173,866</u>	<u>\$183,591</u>

POST 2006 COMPLETION - DEFENSE - CARLSBAD (cont'd)

Explanation of Funding Changes From FY 1998 to FY 1999:

Increase CH TRU waste receiving capabilities at WIPP to increase receipts from a range of 44 to 67 shipments (388 to 592 cubic meters in FY 1998) to a range of 266 to 500 shipments (1,900 to 3,800 cubic meters in FY 1999).	+\$14,705
Implement modification of the Remote Handled (RH) Waste Receipt System to achieve full operational status; develop procedures, training programs, and provide additional personnel to reach operational readiness.	+\$901
Net increase for disposal phase compliance activities including operational monitoring, permanent markers testing, engineered barriers testing, and waste characterization oversight.	+\$490
Decrease for Transuranic waste integration management studies, base program support, and performance improvements.	-\$3,971
New Mexico State Impact Assistance mandatory increase for inflation.	+\$600
Reduction due to completion of DOE commitment to fund Santa Fe Relief Route.	<u>-\$3,000</u>
Total Funding Change, Carlsbad	<u>+\$9,725</u>

POST 2006 COMPLETION - DEFENSE

IDAHO

I. Mission Supporting Goals and Objectives:

MISSION

The Idaho National Engineering and Environmental Laboratory (INEEL), established as the National Reactor Testing Station in 1949, occupies 890 square miles in the Snake River Plain of Southeastern Idaho. Over the years, 52 reactors have been constructed and operated at INEEL. There are nine primary facilities at INEEL as well as administrative, engineering, and research laboratories in Idaho Falls, approximately 50 miles east of the site. Other activities at INEEL over the last five decades include nuclear technology research, defense programs, engineering testing and operations, as well as ongoing projects to develop, demonstrate, and transfer advanced engineering technology and systems to private industry. These activities have resulted in an inventory, as well as the continuous generation, of all waste types totaling approximately 9,786 m³ of high-level waste (HLW), 65,000 m³ of transuranic (TRU) waste, 9,731 m³ of low-level waste (LLW), and 1,295 m³ mixed low-level waste (MLLW). Waste storage, treatment, and disposal capabilities to these ongoing programs are provided through operations at the Waste Reduction Operations Complex (WROC), the Radioactive Waste Management Complex (RWMC), the Idaho Chemical Processing Plant (ICPP), and Test Area North (TAN). The ICPP, a 265 acre facility, was built in the 1950's and modernized in the 1980's, to store and reprocess spent nuclear fuel (SNF) from Government-owned reactors. The INEEL is responsible for 570 m³ of spent fuel from a number of sources, including the Navy, foreign and domestic research reactors, and some commercial reactors. During the past several years, fuel receipts have averaged approximately 40 metric tons of total mass per year. The ICPP facility has recovered more than \$1,000,000,000 worth of highly enriched uranium from the SNF, which was returned to the Government stockpile. The ICPP also includes a high-level liquid waste pretreatment process, known as the New Waste Calcining Facility (NWCF). In the spring of 1992, the decision to end spent fuel reprocessing eliminated a major mission for the plant. It also resulted in the development and implementation of deactivation plans for several facilities and a lay-up of the Fuel Processing restoration project. There are a variety of legally-driven remediation activities at five Waste Area Groups (WAGs) encompassing 50 different operable units (OUs), which are comprised of 508 total release sites and facilities. Potential release sites include tanks, spills, disposal sites, wastewater disposal systems, leach pits, trenches, rubble piles, ponds, cooling towers, wells, landfills, storage areas, and surplus buildings.

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

I. Mission Supporting Goals and Objectives:

2006 STRATEGY

After 2006, INEEL will perform long-term treatment, storage, and disposal operations and will pursue longer-term projects to complete disposition of TRU, HLW, and SNF; and closure of remaining CERCLA remediation sites. Continuous improvements in productivity and efficiency are planned. The budget request assumes both the productivity improvements and the projected efficiencies. At INEEL, technology development activities are underway or planned in several key areas. These include: process studies to increase the sodium bearing radioactive waste throughput at the calciner facility, development of grout formulations for the effective stabilizing of the sodium bearing wastes and for the residual process wastes, which remain in the HLW storage tanks, demonstrations of the effectiveness of solvent extraction processes to remove TRU components and strontium from sodium bearing wastes, development of mercury removal techniques and pilot scale vitrification studies for the high activity wastes, demonstration of mobile TRU waste characterization systems needed to achieve the planned 5,000 drums/year throughput, and robotic inspection systems for the TRU drums, and the demonstration of the use of chemically bonded phosphate ceramics for stabilizing MLLW forms that cannot be effectively treated by established methods, demonstration of advanced waste retrieval and treatment system. The strategy for environmental restoration at INEEL includes extensive use of innovative technologies to accelerate cleanup schedules and reduce costs. Technologies which are being considered for use at Idaho include the Rapid Geophysical Surveyor for ultra-high resolution geophysical mapping, dig face characterization instrumentation adapted to the Global Positioning Radiometric Scanner System for broad area radiation mapping, Remote Excavator for removal of unexploded ordnance, In Situ Bioremediation to remediate organic contaminants at an injection well, and Passive Vapor Vacuum Extraction for removal of below surface organic vapors. Also, a Planer In Situ Vitrification system will be used at the V-Tanks at Test Area North and robotics and advanced decontamination systems for D&D. These technology developments activities are needed to support the Site Treatment Plan and the Settlement Agreement with the State of Idaho. Environmental Restoration remediates all Federal Facility Agreement/Consent Order (FFA/CO) identified contaminated land/facilities as determined under CERCLA. Contaminated facilities used for previous INEEL nuclear reactor testing, SNF reprocessing, and waste treatment, storage, and disposition will undergo decontamination and decommissioning (D&D). The Stabilization and Deactivation Program provides for interim storage of SNF at INEEL, foreign and domestic research reactors, Three Mile Island Unit-2, and Ft. St. Vrain, CO and post-FY 2006 deactivation of 44 surplus contaminated facilities. The Idaho Settlement Agreement requires SNF to be packaged for transfer to a geologic repository and to be removed from the site by FY 2035. The Infrastructure Program ensures adequate, efficient infrastructure support for the other three programs. The EM work at INEEL will require more than 40 years and an estimated life-cycle cost of \$16,900,000,000 (unescalated) to complete. All these activities continue beyond FY 2006 and will be funded in the Post-2006 Completion Appropriation.

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

I. Mission Supporting Goals and Objectives:

2006 STRATEGY (cont'd)

The FY 2006 strategy includes accomplishing the following:

- Transfer 100 percent of DOE SNF to Dry Storage.
- The remaining approximately 62,000 m³ of stored TRU and alpha low-level mixed waste will be treated in the Advanced Mixed Waste Treatment Project (AMWTP) and shipped to WIPP for disposal. The AMWTP is a privatization project, which is discussed in the Defense EM Privatization Budget Narrative and is funded primarily through the EM Privatization Account.
- Newly generated mixed waste will be treated in the AMWTP.
- Final disposition of high-level waste will begin in FY 2035.
- Calcine approximately 3,500 m³ of high-level liquid waste to 1,500 m³ of granular solids by FY 2006.
- All Records of Decision for Environmental Restoration work at INEEL should be negotiated by FY 2002.
- Complete 100 percent of assessments, 90 percent of release sites.

FY 1999 PROGRAM

The FY 1999 budget reflects transfer of funds from the Defense Programs to the Environmental Management (EM) program for the management of nuclear materials, including the Plutonium-Beryllium Neutron Source Program at Los Alamos, that are excess to national security requirements. This completes the transfer of ownership of these materials, begun in FY 1998, at the Fernald Environmental Management Project, Idaho Chemical Processing Plant, Hanford Site, Los Alamos National Laboratory, Rocky Flats Environmental Technology Site and the Savannah River Site. Environmental Management shall be responsible for planning, funding, and managing all activities required for the safe and secure storage of excess national security materials until removed from the sites and disposed.

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

I. Mission Supporting Goals and Objectives:

FY 1999 PROGRAM (cont'd)

In FY 1999 progress and significant milestone accomplishments to achieve maximum progress toward the Post 2006 goal include:

- Preconstruction work is underway for the planned AMWTP privatization project.
- The National Environmental Policy Act (NEPA) actions and design studies for the construction of new HLW treatment and HLW and LLW immobilization facilities for processing 6,000 m³ of calcined waste will be completed in FY 1999.
- In FY 1999, 458 m³ (of the total 570 m³) of the INEEL-managed SNF will be in dry storage or stable wet storage, including the high vulnerability SNF that was located in the deteriorating fuel pools in the ICPP Fuel Receipt and Storage Facility (Building CPP-603). The entire SNF inventory of 570 m³ will be in stable storage by FY 2001. By FY 2006, all INEEL SNF will be in dry storage awaiting final disposition to the repository.
- The INEEL SNF program will also focus on preparations for the permanent disposition of the non-INEEL SNF through its role as the lead laboratory coordinating the National SNF Program. In FY 1999, the program will complete the design of a standardized SNF canister, the basket transportation system, and will ensure DOE fuel is adequately addressed in the Yucca Mountain license application submission to the Nuclear Regulatory Commission.
- There are 508 total release sites and facilities (RS&F), in WAGs (2,3,6,7, and 10, which include (307) surplus facilities in the D&D Program) at the INEEL site. By the end of FY 1997, 11 additional RS&F were completed for a total of 225 completions. In FY 1998, another 18 RS&F are scheduled to be completed and by the end of FY 1999, 19 RS&F are forecasted to be completed for a total completion count of 262.
- Infrastructure projects (ground, roads, general purpose buildings, utilities, communications, computers and information, fleet management, maintenance, fabrication, emergency services, land management, analytical laboratories, and environmental test facilities) will continue at a level adequate to ensure the integrity of required facilities until all commitments are completed. In FY 1999, site wide base support core functions will continue, and surplus buildings/structures will be characterized and demolished under the Facility Disposal Initiative (FDI). In addition, activities include the completion and closeout of prior year general plant projects (GPPs), installation of FY 1998, General Purpose Capital Equipment (GPCE), and conceptual design activities for applicable FY 2001 Line-Item Construction Projects (LICPs).

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

I. Mission Supporting Goals and Objectives:

COMPLIANCE DRIVER

Maintaining full compliance with applicable requirements and agreements, including the Idaho Settlement Agreement, the INEEL Site Treatment Plan under the Federal Facility Compliance Act (FFCA), the FFA/CO, and other Consent Orders, and maximizing risk reduction is the foundation of INEEL Program. Disposition of HLW, TRU waste, and SNF is guided by the Idaho Settlement Agreement between the Department, the Navy, and the State of Idaho. At the ICPP, the High-Level Liquid Waste Evaporator reduces the volume of this waste (1.3 million gallons in 11 tanks) while the NWCF converts the reduced liquids to a more stable solid form. All SNF will be removed from Idaho by FY 2035 to meet an Idaho Settlement Agreement commitment. The MLLW will be treated as described in the site treatment plan. The legal drivers for the remediation activities include the 1989 listing on the National Priorities List as well as the FFA/CO and the Idaho Settlement Agreement.

II. Funding Schedule:

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Remedial Action/Release Sites	\$ 79,074	\$ 61,663	\$ 61,510	\$ -153	-0%
Facility Decommissioning	3,273	3,380	5,398	+2,018	+60%
Nuclear Materials Stabilization	3,820	485	9,037	+8,552	+1,763%
Spent Nuclear Fuel Stabilization	108,583	118,363	125,941	+7,578	+6%
Landlord	26,661	31,024	30,654	-370	-1%
High-Level Waste	43,445	54,924	45,918	-9,006	-16%
Transuranic Waste	2,800	1,000	8,714	+7,714	+771%
Program Support	30,953	29,270	23,619	-5,651	-19%
MLLW/LLW Center of Excellence	<u>0</u>	<u>0</u>	<u>400</u>	<u>+400</u>	<u>n/a</u>
TOTAL, Idaho	<u>\$298,609</u>	<u>\$300,109</u>	<u>\$311,191</u>	<u>\$+11,082</u>	<u>+4%</u>

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

[PBS Numbers are Bracketed in the Text]

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites

The 50 Operable Units at the INEEL have been grouped into five Waste Area Groups (WAGs) and include: (1) Test Reactor Area which houses extensive facilities for studying the effects of radiation of materials, fuels and equipment; (2) Idaho Chemical Processing Plant (ICPP) which houses reprocessing facilities for Government-owned defense and research spent fuels; (3) Experimental Breeder Reactor (EBR-I); (4) Radioactive Waste Management Complex which is a controlled area established for the disposal of solid radioactive wastes generated in INEEL operations; (5) Naval Reactors Facility which researched and developed prototype reactors for both submarines and surface ships; (6) Argonne National Laboratory - West (managed through the Chicago Operations Office) which serves as the nation's testing ground for breeder-reactor technology; and (7) miscellaneous surface sites and liquid disposal areas throughout the INEEL that are not included in the other WAGs.

Potential release sites addressed under the five WAGs include tanks, spills, disposal sites, wastewater disposal systems, leach pits, trenches, rubble piles, ponds, cooling towers, wells, landfills, storage areas, etc.

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Conduct WAG 2 Activities [ID-ER-102]	\$1,168	\$1,352	\$2,928
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Continued operation and monitoring of the Warm Waste Water Pond and monitoring of perched water. - Completed the WAG 2 Comprehensive RI/FS report and Proposed Plan. • In FY 1998: <ul style="list-style-type: none"> - Complete signing of ROD. - Complete WAG 2 Comprehensive RI/FS remedial action planning and design activities. - Initiate remedial action as required by ROD. • In FY 1999: <ul style="list-style-type: none"> - Continue remedial action under comprehensive ROD. - Initiate operations and maintenance of the Warm Waste Water Pond Cap. 			
Conduct WAG 3 Activities [ID-ER-103]	\$2,268	\$2,861	\$11,541
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Prepared the final WAG 3 (Idaho Chemical Processing Plant) Comprehensive RI/FS Report, the Baseline Risk Assessment report, and the Proposed Plan. - Continued investigation of new release sites. • In FY 1998: <ul style="list-style-type: none"> - Complete Final Proposed Plan, WAG 3 Final Comprehensive RI/FS ROD, and preliminary remedial decision/remedial action scope of work. - Initiate RI/FS for High-Level Waste (HLW) Tank Farm remediation. 			

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Conduct WAG 3 Activities [ID-ER-103] (cont'd)			
• In FY 1999:			
- Complete the Draft Final Remedial Design Remedial Action Scope of Work and Work Plan.			
- Develop functional and operating requirements, Sampling and Analysis Plan, Operations and Maintenance Plan, engineering designs.			
- Initiate contractor procurement.			
- Continue HLW Tank Farm RI/FS.			
Conduct WAG 7 Activities [ID-ER-106 and ID-ER-107]	\$56,048	\$41,022	\$26,963
• In FY 1997:			
- Continued groundwater monitoring.			
- Completed the Vacuum Vapor Extraction (VVE) Phase I remedial action report and continued VVE remedial action.			
- Completed the TRU Pits and Trenches RI/FS Scope of Work.			
- Initiated RI/Baseline Risk Assessment report and proposed Plan.			
- Continued maintenance and monitoring of Pad A.			
- Completed the Pit 9 RD/RA scope of work and pits/trenches RI/FS scope of work.			
- Continued construction of the treatment building, retrieval building, administration area, and off-site construction.			
• In FY 1998:			
- Continuation of the VVE Remedial Action and groundwater and Pad A monitoring.			
- Develop plans for Stage 1 subsurface exploration of Pit 9 (or alternate pit) to obtain materials for bench-scale treatability studies for TRU Pits and Trenches projects.			
- Continue Pit 9 treatment building construction and preparation for Limited Production Test (LPT).			

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Conduct WAG 7 Activities [ID-ER-106 and ID-ER-107] (cont'd)			
• In FY 1999:			
- Continuation of VVE remedial action and groundwater monitoring.			
- Conduct bench-scale treatability studies on waste materials from Pit 9 (or alternate pit) and characterization concerning waste form and contaminant migration for TRU Pits and Trenches.			
- Develop plans for stage 2 limited retrieval/excavation in selected areas of Pit 9 (or alternate pit) and pilot-scale treatability studies and test.			
- Continue plans for LPT for Pit 9.			
- Perform treatability studies for TRU pits and trenches RI/FS.			
Conduct WAG 10 Activities [ID-ER-108]	\$5,522	\$1,833	\$3,572
• In FY 1997:			
- Continued critical ordnance area removal actions.			
- Continued the ordnance area Track 2 assessment.			
- Completed WAG 10 Comprehensive RI/FS Scope of Work, Work Plan, and field work.			
- Continued to maintain the Hydrogeologic Data Repository.			
• In FY 1998:			
- Complete preliminary scoping for Track 2 Assessment of Unexploded Ordnance and WAG 10 Comprehensive RI/FS.			
• In FY 1999:			
- Initiate comprehensive RI/FS remedial action.			
- Provide support to all other WAGs.			
- Complete comprehensive RI/FS proposed plan and ROD.			

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Conduct Environmental Operations Activities for assessment and remediation for all WAGs at INEEL, including compliance required program management, configuration management, data management, sample management, strategic planning, administrative record maintenance, quality and compliance assurance, systems planning control, community relations, and waste stream tracking. [ID-ER-109]	\$14,068	\$14,595	\$16,506
Assessments			
• In FY 1997, completed no assessments.			
• In FY 1998, will complete 39 assessments.			
• In FY 1999, will complete no assessments.			
Cleanups			
• In FY 1997, completed five cleanups.			
• In FY 1998, will complete 12 cleanups.			
• In FY 1999, will complete four cleanups.			
Subtotal, Remedial Action/Release Sites	<u>\$79,074</u>	<u>\$61,663</u>	<u>\$61,510</u>

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facility Decommissioning</u>			
Perform D&D Activities at Various ARA Sites [ID-ER-110]	\$3,273	\$3,380	\$5,398
• In FY 1997:			
- Completed demolition and restoration of the Army Re-entry Vehicle Facility Site Nak bunker.			
- Treated and disposed of the Nak residue as low-level waste (LLW) at the Radioactive Waste Management Complex.			
- Completed ARA 626 Hot cell D&D.			
- Completed D&D and the Final Report for ARA II.			
- Completed D&D at ARA III.			
- Completed the D&D Final Report for BORAX V.			
- Initiated D&D of the TAN-Technical Support Facility.			
- Characterized and transferred Loss of Fluid Test (LOFT) Mobile Test Assembly for dismantlement.			
- Completed D&D of Idaho Chemical Processing Plant (ICPP) 63L, -709, and -734, as well as the Cooling Tower Basin and pumphouse at the Test Reactor Area (TRA).			
- Initiated characterization, planning, and engineering for TAN-620 and TAN-656 (Control Room and Change Room).			
- Planned, designed, initiated, and completed TRA-643 D&D.			
- Initiated D&D planning for TRA 644 Heat Exchangers Building and TRA-641 Gamma Building.			
• In FY 1998:			
- Completion of the D&D Final Report for ARA III.			
- Initiation of D&D planning activities for LOFT.			
- Continuation of D&D at the TAN-Technical Support Facility.			
- Initiation of D&D planning activities for ICPP 601 and ARMF.			

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

Facility Decommissioning

FY 1997

FY 1998

FY 1999

Perform D&D Activities at Various ARA Sites [ID-ER-110] (cont'd)

- In FY 1999:
 - Completion of LOFT MTA D&D and final report.
 - Completion of TAN-Technical Support Facility D&D and final report.
 - Completion of ARMF D&D and final report.
 - Completion of TRA-705 secondary Filter Pit D&D and final report.
 - Start physical work at TRA-644 (Heat Exchanger Building) and TRA-641 (Gamma Building) characterization, planning, and design for TAN-725 stack.
 - Characterization and planning for TRA-643 (compressor Building).

Assessments

- In FY 1997, completed one assessment.
- In FY 1998, will complete seven assessments.
- In FY 1999, will complete six assessments.

Cleanups

- In FY 1997, decommissioned six buildings.
- In FY 1998, will decommission six buildings.
- In FY 1999, will decommission six buildings.

Subtotal, Facilities Decommissioning

\$3,273

\$3,380

\$5,398

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Nuclear Materials Stabilization</u> [ID-6346-Pu and ID-OIM-102]			
The Plutonium Focus Area (PFA) was established to address plutonium stabilization and storage issues and coordinate Department-wide research and development (R&D) programs. The PFA provides for standardized processes for plutonium storage, stabilization, surveillance and monitoring, and other core technologies for safe plutonium management and disposition.	\$3,820	\$485	\$9,037
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Provided management, administrative, and planning activities for integration plutonium R&D requirements across the complex. - Published update of the the DNFSB Recommendation 94-1, Research and Development Plan. - Provided peer review of the plutonium R&D priorities. • In FY 1998: <ul style="list-style-type: none"> - Continue PFA management, administrative, and planning activities at a reduced level. - Apply systems engineering expertise to integrate plutonium stabilization activities across the complex. • In FY 1999: <ul style="list-style-type: none"> - PFA responsibility transferred to the Office of Science and Technology. - Includes \$9,037,000 for the planning, funding, and management of all activities required for the safe and secure storage of 3.6 metric tons of special nuclear materials that are excess to national security requirements. 			
Subtotal, Nuclear Materials Stabilization	<u><u>\$3,820</u></u>	<u><u>\$485</u></u>	<u><u>\$9,037</u></u>

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Spent Nuclear Fuel Stabilization

Spent Nuclear Fuel [ID-SNF-101, ID-SNF-102, ID-SNF-103, ID-SNF-106]

The Spent Nuclear Fuel Stabilization Program at INEEL provides for the packaging and disposition of 570 m³ of Spent Nuclear Fuel (SNF) at DOE-ID managed facilities at the INEEL and Fort St. Vrain, Colorado and 3,600 kilograms of Special Nuclear Material in the form of fissile uranium. The focus of the INEEL SNF program is on preparing spent fuel for permanent disposition in a geological repository on a schedule that complies with the Idaho Settlement Agreement. Through its remaining life cycle, the SNF program will receive and store additional Naval SNF, Foreign Research Reactor fuel which is being returned to the U.S in support of nonproliferation policy, and small quantities of various SNF within the U.S. per the Spent Nuclear Fuel Programmatic Environmental Impact Statement. The INEEL SNF program currently stores DOE reactor fuel, Three Mile Island (TMI) Fuel and other DOE assigned spent fuel. The Program also supports the INEEL's role as the lead laboratory for the National SNF Program.

The Program is focused on reducing life-cycle costs through the consolidation of storage areas and the transfer of SNF from pool storage to dry storage. The SNF must be characterized, treated (if necessary), and placed in a road-ready dry storage system for transfer to a geologic repository by year 2035. By the end of FY 1999, 458 m³ of the 570 m³ SNF will have been placed in stable interim storage (including 3.5 m³ of SNF that was stored in a highly vulnerable condition at the CPP-603 underwater storage facility).

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Spent Nuclear Fuel Stabilization (cont'd)

The Program provides critical surveillance and maintenance activities that are required to ensure protection of the public and workers while preparations are made to dispose of the spent fuel in a geological repository. The SNF Surveillance and Maintenance Program also provides essential utilities, engineering support, and technical services at the INEEL's Idaho Chemical Processing Plant (ICPP). These services are critical to the completion of High-Level Waste (HLW), Low-Level Waste (LLW), Environmental Restoration, and SNF projects required by the Idaho Settlement Agreement.

ICPP Infrastructure Operations [ID-OIM-102]

The scope described in this section is infrastructure for ICPP, not part of the site wide landlord requirements at INEEL.

\$44,422

\$40,780

\$39,811

- In FY 1997:
 - Provided steam for 130 buildings.
 - Distributed 147,000 kilowatt hours per day of electricity.
 - Provided 2.5 million gallons of water per day.
 - Performed maintenance on 80 pieces of major equipment and 350 instrumentation systems.
 - Provided facilities maintenance (8,000 orders per year), work control, and general services such as: custodial, training, roads and grounds upkeep, warehousing, and personnel protection equipment for 1,300 people and 130 buildings.
 - Provided engineering and administrative support to ICPP by processing over 4,000 drawings, completing four steam safety and ten fire system analyses, maintaining 16,700 controlled distribution copies, and completing six facility models.

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Spent Nuclear Fuel Stabilization

ICPP Infrastructure Operations [ID-OIM-102]

- In FY 1997: (cont'd)
 - Provided environmental, safety, health and quality assurance programs for the general plant facilities at ICPP (i.e., radiological control, industrial safety, fire protection, industrial hygiene, environmental permitting compliance, and chemical management).
 - Completed 110 surveillance, preventive, and corrective maintenance activities daily to ensure the safe storage of special nuclear material and spent nuclear fuel at the Unirradiated Fuel Storage Facility.
- In FY 1998:
 - Continue those activities described for FY 1997.
 - Incorporate process efficiencies identified through the ICPP Effectiveness Improvement Initiative.
- In FY 1999:
 - Will continue those activities described for FY 1997.
 - Will overhaul steam boiler tubes to provide heating and process steam for HLW and SNF operations.
 - Will maintain structural roof integrity on facilities that involve HLW and SNF operations (eight roofs will be upgraded).
 - Will upgrade ~two miles of ICPP inner roads for future SNF shipments.

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Spent Nuclear Fuel Stabilization</u>			
ICPP General Infrastructure Projects [ID-OIM-102]	\$5,176	\$10,764	\$12,634
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Continued closeout of projects started in prior fiscal years, including three capital equipment projects, the Reverse Osmosis water treatment project, and the project to install new electrical switchgear at ICPP. - Completed title design and started construction of the CPP-637 Condensate Pipe Replacement and Westside Condensate Replacement Projects. - Completed title design and started construction for the ICPP sanitary wastewater plant upgrade. - Started Title Design for the Irradiated Fuel Storage Facility (IFSF) West Wall (structural reinforcement) Modification Project. - Performed activities to support project management, such as cost estimating, documentation, and project closeouts. • In FY 1998: <ul style="list-style-type: none"> - Provide project support and complete or continue closeout of projects started in previous fiscal years. - Start title design for approved infrastructure General Plant Projects (GPPs). - Complete conceptual design of the IFSF West Wall Modification Project. - Continue activities to support project management and closeout. • In FY 1999: <ul style="list-style-type: none"> - Will complete and close out prior year projects and complete conceptual designs for applicable FY 1999 GPPs. - Will close out FY 1997 General Plant Capital Equipment/Capital Equipment (GPCE/CE) acquisitions and will install FY 1998 (GPCE/CE) items. - Will prioritize and initiate FY 1999 requests and will initiate conceptual design for FY 2000 line-item construction projects. 			

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Spent Nuclear Fuel Stabilization</u> (cont'd)			
National Spent Nuclear Fuel Program [ID-SNF-101 and ID-SNF-106]	\$31,526	\$39,165	\$24,349
• In FY 1997:			
- Facilitated DOE site preparations to place spent fuel in safe dry storage.			
- Continued development of the process by which DOE SNF can be accepted into a repository.			
- Coordinated work with the Office of Civilian Radioactive Waste Management (OCRWM) to develop acceptance criteria and standardized containers for disposal of the SNF.			
• In FY 1998:			
- Continue to facilitate site activities and development of acceptance criteria.			
- Examine criticality concerns and provide date for the Yucca Mountain Environmental Impact Statement.			
- Continue work with OCRWM to prepare a Viability Assessment.			
• In FY 1999:			
- Will continue ongoing work with the site and OCRWM.			
- Will provide input for the Yucca Mountain NRC license application.			
- Will complete the design of the DOE SNF canister and basket.			
- Will complete the specification for EM's standard canister transportation system and perform key parameter testing and analysis.			
- Will increase the Foreign Research Reactor (FRR) fuel receipts and National Spent Fuel Program activities.			

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Spent Nuclear Fuel Stabilization</u> (cont'd)			
INEEL Spent Nuclear Fuel Programs [ID-SNF-102]	\$17,399	\$17,163	\$9,705
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Completed ongoing activities including receipt of SNF, facility surveillance and maintenance, program management for support, technology development, and preparation for disposal. - Submitted the Fort St. Vrain NRC license application. - Completed eight Advanced Test Reactor SNF shipments and 17 Naval SNF shipments. • In FY 1998: <ul style="list-style-type: none"> - Continue fuel receipt activities described for FY 1997. - Receive 60 planned shipments of Naval spent fuel. • In FY 1999: <ul style="list-style-type: none"> - Will continue ongoing activities described for FY 1997. - Will continue the receipt of Naval SNF. 			
INEEL Foreign Research Reactor (FRR) Fuel Program [ID-SNF-102]	\$2,989	\$5,748	\$9,716
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Completed activities in preparation for receiving FRR SNF. • In FY 1998: <ul style="list-style-type: none"> - Receive the first FRR SNF shipment to the INEEL of 30-40 shipments expected over the next 13 years. • In FY 1999: <ul style="list-style-type: none"> - Will continue to receive shipments of FRR SNF. - In addition, the Department's Cost of Work for Others program will provide \$3.1 million of equal budget authority to the amount of revenues received at Idaho. 			

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Spent Nuclear Fuel Stabilization</u> (cont'd)			
CPP-603 Spent Fuel Removal [ID-SNF-103]	\$7,071	\$4,743	\$29,726
• In FY 1997:			
- Completed ongoing activities including facility maintenance, fuel monitoring activities, and preparations for transfer of SNF.			
- Completed transfer of 289 fuel handling units (FHUs) containing 0.45 metric tons of heavy metal (MTHM) from CPP-603 Fuel Receipt and Storage Facility to CPP-666 Fuel Storage Area (39 percent of the total FHUs to be transferred from CPP-603).			
• In FY 1998:			
- Continue ongoing activities as described in FY 1997.			
- Transfer an additional 283 FHUs containing 1.15 MTHM (another 38 percent of the total) from CPP-603 to CPP-666.			
• In FY 1999:			
- Will complete remaining 23 percent of the fuel transfers (171 FHUs containing 0.50 MTHM) as required by the Idaho Settlement Agreement.			
- Due to revisions to the fuel transfer schedule, scope will be completed using FY 1998 carryover dollars.			
Dry Storage of CPP-666 DOE Spent Fuel [ID-SNF-103]			
• In FY 1997:			
- Completed ongoing activities including receipt of spent nuclear fuel, facility surveillance and maintenance, program management and preparation of spent fuel for transfer to dry storage facilities.			
- Completed the wet load out station conceptual design and issued a draft Request for Proposal for the dry storage container system conceptual design.			

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Spent Nuclear Fuel Stabilization (cont'd)

Dry Storage of CPP-666 DOE Spent Fuel [ID-SNF-103] (cont'd)

- In FY 1998:
 - Continue ongoing activities as described for FY 1997.
 - Complete NRC license submittal.
 - Initiate design of dry storage modules and pad fuel storage canisters for SNF removed from the CPP-666 Fuel Storage Area (FSA).
 - Initiate wet loadout of SNF from Building 666 scope of work.
- In FY 1999:
 - Will continue ongoing activities as described in FY 1997.
 - Will complete the dry storage facility design and FSA modifications design.
 - Will complete construction of the dry storage facility fence and security modifications.
 - Will perform scoping studies for the balance of fuel movements remaining in CPP-666 FSA.
 - Continue wet loadout of SNF from Building 666.

Long-Term Storage of TMI-2 Fuel [ID-SNF-103]

- In FY 1997:
 - Ongoing activities included facility maintenance, fuel monitoring activities, and preparations for transfer of TMI-2 SNF.
- In FY 1998:
 - Increase ongoing activities described in FY 1997 as new storage facility nears completion.
- In FY 1999:
 - Will continue ongoing activities as described in FY 1997.
 - Will initiate removal of the TMI-2 fuel from wet storage.
 - Will conduct drying operations to remove free water from damaged fuel canisters and package the fuel in NRC licensed transport casks.

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Spent Nuclear Fuel Stabilization</u> (cont'd)			
Spent Nuclear Fuel Stabilized			
• In FY 1997, 0.465 Metric Tons Heavy Metal (MTHM) were stabilized.			
• In FY 1998, 3.45 MTHM will be stabilized.			
• In FY 1999, 14.5 MTHM will be stabilized.			
Subtotal, Spent Nuclear Fuel Stabilization	\$108,583	\$118,363	\$125,941

Landlord

The Site Wide Landlord Operations Project Baseline Summary (PBS) consists of four primary projects, which perform core functions required by multiple and varied programs at INEEL. These projects are necessary for all programs at the INEEL and are critical to the INEEL's effort to support all compliance agreements associated with Spent Nuclear Fuel, INEEL Waste Streams, Environmental Remediation, the Federal Facilities Agreement and Consent Order (FFACO), Facility Deactivation, and the Idaho Settlement Agreement. The projects are Site Wide Base Support, Facility Upgrades, Capital Acquisitions, and Facility Disposal Initiative (FDI). The primary mission of the Site Wide Base Support project can be captured by the following core functions, which include: environmental monitoring, oversight and permitting, integrated sitewide planning, land management, natural resources management, capital asset management and inspections, operations of the EBR-1 National Monument, emergency preparedness, safety and health deficiency corrections, and maintenance of standards within the sitewide framework. The Facility

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

Landlord (cont'd)

FY 1997

FY 1998

FY 1999

Upgrades project contains a variety of multi-program and general purpose infrastructure capital improvement requirements including smaller capital improvements in the form of General Plant Project (GPP) as well as funding for proposed out year Line-Item Construction Projects (LICP). The Capital Acquisition project contains a variety of multi-program and general purpose infrastructure capital improvement requirements involving the acquisition and installation of General Purpose Capital Equipment (GPCE). These capital improvements are necessary for upgrading and maintaining the non-programmatic facility and equipment infrastructure, which is required for all operations at INEEL.

Facility Upgrades and Capital Acquisitions are required to deliver new and/or adapt existing facilities and equipment to: (a) meet critical mission needs; (b) reduce or eliminate Environmental, Safety and Health (ES&H) problems; (c) affect economies of operations; and (d) support and maintain the physical infrastructure of the INEEL. The Facility Disposal Initiative project provides for the planning, sampling, characterization, and disposal of noncontaminated and nonessential facilities at INEEL.[ID-OIM-101]

\$26,661

\$23,024

\$30,654

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Landlord (cont'd)

- In FY 1997:
 - Accomplished Meteorological Monitoring, Seismic Monitoring, Emergency Preparedness, Environmental Monitoring, EBR-1 and Integrated Facility Planning Activities.
 - Provided electronic access to INEEL Comprehensive Facility and Land Use Plan via the internet to both internal and external customers.
 - Completed a seismic study/evaluation of INEEL facilities.
 - Provided electronic access to INEEL Cost Estimating guide via the internet to both internal and external customers. Completed FY 1997 portion of Backlog of Maintenance and Repair (BMAR) Safety and Health Corrections items.
 - Purchased, installed, and made fully operational all approved FY 1996 and prior GPCE.
 - Completed construction on all approved FY 1996 and prior GPPs.
 - Completed Conceptual Design for the proposed FY 1999 Health Physics Instrument Laboratory LICP.
 - Completed preconceptual development of the proposed FY 2000 Site Operations Center LICP.
 - Completed characterization and demolition of the following facilities/structures totaling 38,000 square feet: CFA 639, 645, 665, 672, 672, 678, 687, 751, 751, 769, 770, and 1707.

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Landlord (cont'd)

- In FY 1998:
 - Plan to accomplish continuing Meteorological Monitoring, Seismic Monitoring, Emergency Preparedness, Environmental Monitoring, EBR-1, and Integrated Facility Planning Activities.
 - Plan to complete a limited portion of FY 1998 Backlog of Maintenance and Repair (BMAR) Safety and Health Corrections items.
 - Purchase, install, and make fully operational all approved FY 1997 and prior GPCE.
 - Complete construction on all approved FY 1997 and prior GPPs.
 - Complete Conceptual Design for the proposed FY 2000 Site Operations Center LIPC.
 - Complete preconceptual development of the proposed FY 2001 LIPC. No FDI funding is anticipated for FY 1998.
- In FY 1999:
 - Plan to accomplish continuing Meteorological Monitoring, Seismic Monitoring, Emergency Preparedness, Environmental Monitoring, EBR-1 and Integrated Planning Activities.
 - Plan to complete a limited portion of FY 1998 Backlog of Maintenance and Repair (BMAR) Safety and Health Corrections items.
 - Purchase, install, and make fully operational all approved FY 1997 and prior GPCE.
 - Complete construction on all approved FY 1998 and prior GPPs.
 - Complete Conceptual Design for the proposed FY 2001 LIPC.
 - Complete preconceptual development of the proposed FY 2002 LIPC.
 - Complete characterization and demolition of TAN 602 under the FDI program.

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Landlord</u> (cont'd)			
Idaho Long-Range Plan	\$0	\$8,000	\$0
• In FY 1997:			
- No activity.			
• In FY 1998:			
- Provides for several activities under the Idaho Long-Range Plan, which is also partially funded by the Office of Science and Technology program. Activities include: Complex-Wide Integration, which completes the transition of an independent contractor review to a Federally-managed partnership studying opportunities for complex-wide integration to reduce cost and risk; Systems Engineering Support for development of a program execution plan in accordance with the Department's Implementation Plan for addressing Uranium-233 vulnerabilities described in the Defense Nuclear Facility Safety Board Recommendation 97-1.			
• In FY 1999:			
- All activities are funded by the Office of Science and Technology.			
Subtotal, Landlord	<u>\$26,661</u>	<u>\$31,024</u>	<u>\$30,654</u>

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>High-Level Waste</u> [ID-HLW-101, ID-HLW-103, and ID-HLW-105]			
<p>The mission of the high-level waste (HLW) program is to safely store, pretreat, and process for final disposal, liquid HLW and calcine. The liquid HLW at the Idaho Chemical Processing Plant (ICPP) has been converted to a safer, more easily stored solid form by the calcining process since 1963. The resulting calcine is stored in stainless steel bins. Residual liquid HLW and radioactive sodium-bearing liquid waste are stored in stainless steel tanks contained in concrete vaults. In 2006, there will be approximately 2,800 m³ of radioactive liquid waste and 5,400 m³ of calcine stored at the ICPP. The Idaho Settlement Agreement calls for all sodium bearing waste to be calcined by FY 2012 and to have all HLW ready to leave the state by FY 2035. The New Waste Calcining Facility will continue to operate until FY 2012 to empty the Tank Farm to comply with the Idaho Settlement Agreement. This will result in approximately 6,000 m³ of calcine stored at the ICPP. All HLW is considered to be mixed waste because it contains hazardous components regulated under RCRA. The waste is therefore subject to Land Disposal Restrictions and is included in the FFCA and FFA/CO signed with the State of Idaho.</p>	\$43,445	\$54,924	\$45,918
• In FY 1997:			
- Awarded contract for feasibility studies for the HLW immobilization facility.			
- Restarted the New Waste Calcining Facility (NWCF) and processed approximately 300 m ³ of non-sodium bearing liquid waste.			
- Submitted schedule for treatment of NWCF backlog.			
- Issued plan and initiated activities to reduce liquid waste generation by 35 percent through waste minimization.			
- Operated the High-Level Liquid Waste Evaporator (HLLWE) to reduce Tank Farm volume by 330,000 gallons.			

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

High-Level Waste [ID-HLW-101, ID-HLW-103, and ID-HLW-105] (cont'd)

- In FY 1997: (cont'd)
 - Treated approximately 1,624 m³ of HLW using the HLLWE and NWCF.
 - Maintained safe and compliant storage of calcine waste and liquid HLW.
 - Procured contracts for debris treatment process.
 - Initiated construction of debris treatment process.
- In FY 1998:
 - Calcine remaining 720 m³ of non-sodium bearing liquid waste.
 - Prepare an EIS for final HLW disposition.
 - Treat approximately 1103.4 m³ of HLW using the HLLWE and NWCF.
 - Maintain safe and compliant storage of calcine waste and liquid HLW.
 - Prepare tank farm closure plan and complete two tank assessments.
- In FY 1999:
 - Commence debris treatment system testing.
 - Complete the EIS for HLW disposition and issue ROD and initiate development of path forward for treatment.
 - Maintain safe and compliant storage of calcine waste and liquid HLW.
 - Treat approximately 845.9 m³ of HLW using the HLLWE and NWCF.
 - Complete maintenance turnaround of the NWCF and begin calcination of sodium bearing waste.
 - Develop and submit data for approval of ICPP sampling and analytical methods from the State.
 - Treat approximately 11 m³ of filters with the Filter Leach Process.
 - Complete preliminary design for the Low Activity Waste Treatment project and initiate NEPA process.

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>High-Level Waste</u> [ID-HLW-101, ID-HLW-103, and ID-HLW-105] (cont'd)			
Treatment			
• In FY 1997, 1,624 cubic meters of HLW was treated.			
• In FY 1998, 1103.4 cubic meters of HLW will be treated.			
• In FY 1999, 845.9 cubic meters of HLW will be treated.			
Storage			
• In FY 1997, 9,786 cubic meters of HLW was stored.			
• In FY 1998, 9,374 cubic meters of HLW will be stored.			
• In FY 1999, 9025.6 cubic meters of HLW will be stored.			
Disposal			
• In FY 1997, no canisters of HLW was disposal ready.			
• In FY 1998, no canisters of HLW will be disposal ready.			
• In FY 1999, no canisters of HLW will be disposal ready.			
Subtotal, High-Level Waste	\$43,445	\$54,924	\$45,918

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Transuranic Waste AMWTP Production Operations</u> [ID-WM-105]			
<p>The Idaho Settlement Agreement requires a minimum of 3,100 m³ of TRU waste to be shipped out of the state by December 2002. The approximately 61,900 m³ of TRU Waste remaining after December 2002, will be treated in the planned, privatized Advanced Mixed Waste Treatment Project (AMWTP) to meet WIPP WAC before it is shipped for disposal. The AMWTP is a privatization project, which is discussed in the Defense EM Privatization Budget Narrative (ID-WM-104) and is funded primarily through the EM Privatization Account. All TRU waste is planned to be removed from Idaho by December 31, 2015, but no later than December 31, 2018, as required by the Agreement. The AMWTP will treat mixed waste streams identified in the INEEL Site Treatment Plan required by the Federal Facilities Compliance Act of 1992. The AMWTP will undergo D&D and RCRA closure after scheduled completion of treatment in FY 2015, unless DOE extends the contract to treat non-INEEL waste.</p>	\$2,800	\$1,000	\$8,714
<ul style="list-style-type: none">• In FY 1997:<ul style="list-style-type: none">- Awarded the AMWTP contract for treatment of TRU waste.- Initiated Phase I of the AMWTP procurement including NEPA evaluation, DOE Environmental Safety and Health (ES&H) authorization, permitting, and design in support of a Settlement Agreement milestone to complete construction of a TRU waste treatment facility by December 31, 2002.• In FY 1998:<ul style="list-style-type: none">- Continue Phase I of the AMWTP procurement, including NEPA evaluation, DOE ES&H Authorization, permitting, and design in support of a Settlement Agreement milestone to complete construction of a TRU treatment facility by December 31, 2002.			

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Transuranic Waste AMWTP Production Operations</u> [ID-WM-105] (cont'd)			
<ul style="list-style-type: none">• In FY 1999:<ul style="list-style-type: none">- Complete Phase I of the AMWTP procurement, including NEPA evaluation, DOE ES&H Authorization, permitting, and design in support of a Settlement Agreement milestone to complete construction of a TRU treatment facility by December 31, 2002.			
Treatment			
<ul style="list-style-type: none">• In FY 1997, not applicable until 2003.• In FY 1998, not applicable until 2003.• In FY 1999, not applicable until 2003.			
Storage and Disposal metrics can be found in the Site/Project Completion budget, under Idaho TRU Waste.			
Subtotal, Transuranic Waste	\$2,800	\$1,000	\$8,714
<u>LLW/MLLW Center of Excellence</u> [ID-CTREXC-101]	\$0	\$0	\$400

The Low-Level Waste/Mixed Low-Level Waste (LLW/MLLW) Center of Excellence (the Center) will analyze critical waste management issues, formulate effective solutions with respect to those issues, and assist DOE Headquarters in establishing policies, which are put into practice by DOE low-level waste and mixed low-level waste programs nationwide. The Center serves as the focal point for policy, planning, and implementation of DOE's LLW and MLLW programs. The Center's charge is to standardize and streamline LLW/MLLW activities, standardize terms/definitions/data and provide an information clearinghouse, centralize functions to eliminate redundancies, and maintain a pool of

expertise for addressing LLW/MLLW issues.

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>LLW/MLLW Center of Excellence</u> [ID-CTREXC-101] (cont'd)			
• In FY 1999:			
- Issue final standardized waste acceptance criteria for LLW disposal.			
- Issue standardized functional activity terms dictionary.			
- Issue program plan for commercial disposal site audit team.			
 <u>Program Support</u>			
In FY 1999, the Department will divide responsibility for obtaining and maintaining contractor security clearances. The Office of Security Affairs, which has been responsible for funding all contractor and Federal security clearances in previous years, will budget only for Federal employees at Headquarters and the field, in addition to Headquarters contractor clearances. This change in policy will enable program managers to make decisions as to how many and what level of clearances are necessary for effective program management. In FY 1999, \$497,543 is included in the Idaho budget for contractor security clearances.			
Remedial Actions/Release Sites [ID-ER-109]	\$14,281	\$7,277	\$3,707
• In FY 1997, FY 1998, and FY 1999:			
- Provide compliance required program management, including configuration management, data management, sample management, strategic planning, administrative record maintenance, quality and compliance assurance, systems planning control, community relations, and waste streams tracking. Includes prior year comparability adjustment to Base Table.			
- Provide funding for the FFA/CO (Consent Order) Grant with the State of Idaho; provide for technical data development by the United States Geological Services and University Foundation; and technical support contractors supporting technical/programmatic and program management functions.			

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Program Support</u> (cont'd)			
- Provide for various EM crosscutting efforts which are Headquarters managed activities, which vary from year to year and site-to-site and are determined during year of execution.			
Waste Activities [ID-WM-106 and ID-WM-108]	\$16,672	\$21,993	\$19,912
• In FY 1997, FY 1998, and FY 1999:			
- Provide site-wide environmental monitoring, transportation, and oversight of waste activities. Examples are safety and performance analyses, compliance reports, training, quality assurance, waste tracking, and sampling and data analyses. They also include activities needed to ensure compliance with the requirements in the state Settlement Agreement and Consent Order for TRU and TRU mixed waste, such as safety analyses reports, TRU database maintenance, and preparation of RCRA permit applications.			
Subtotal, Program Support	<u>\$30,953</u>	<u>\$29,270</u>	<u>\$23,619</u>
TOTAL, IDAHO	<u>\$298,609</u>	<u>\$300,109</u>	<u>\$311,191</u>

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

Explanation of Funding Changes From FY 1998 to FY 1999:

Remedial Action/Release Sites: The major decrease in remedial actions occurs because of reduction in funding for the Pit 9 (partially offset by increases for the TRU Pits and Trenches) subcontract. - \$153

Facility Decommissioning: The increase results from completion of D&D at the TAN Technical Support Facility in FY 1999, a major D&D effort. + \$2,018

Nuclear Materials Stabilization: Increase reflects transfer of safeguards and security for special nuclear materials responsibilities from Defense Programs. + \$8,552

Spent Nuclear Fuel Stabilization: The increase in Spent Nuclear Fuel Stabilization funding is attributable to an increase in Foreign Research Reactor (FRR) fuel receipts and National Spent Fuel Program activities (i.e., increase support for NRC license application and design activities) to ensure compliance with the Idaho Settlement Agreement, the increases were partially offset by reductions in other stabilization activities. + \$7,578

Landlord: Major increases due to characterization and demolition of surplus buildings/structures under the Facility Disposal Initiative, as well as funding for maintenance of EBR-I National Monument, maintenance of the AE Standards/Cost Estimating Manual, Safety and Health deficiency backlog corrections, and for the completion and closeout of prior year GPPs, and conceptual design activities for applicable FY 2001 LICPs (\$+7,630); The increase is offset by transfer of Idaho Long Range Plan activities to the Office of Science and Technology (-\$8,000) - \$370

High-Level Waste: Decrease in funding is because of reduced operations of the New Waste Calcine Facility (NWCF) and program support efficiencies are partially offset by the technical evaluations of alternative paths forward for the treatment and immobilization of the high activity waste. Construction of the debris treatment process will be completed and testing will begin. - \$9,006

Transuranic Waste: Increase provides for permitting and design associated with the AMWTP procurement. + \$7,714

Low-Level Waste Center of Excellence: Activity previously funded under Program Direction.

+\$400

POST 2006 COMPLETION - DEFENSE - IDAHO (cont'd)

Explanation of Funding Changes From FY 1998 to FY 1999:

Program Support: Decrease of funding reflects major increase in efficiency. INEEL has reviewed and is committed to reducing the support cost base from the current level for FY 1999 and beyond.

-\$5,651

Total Funding Change, Idaho

+\$11,082

POST 2006 COMPLETION - DEFENSE

NEVADA

I. Mission Supporting Goals and Objectives:

MISSION

The Department of Energy (DOE) Nevada Operations Office's (DOE/NV) Environmental Management (EM) mission is to characterize and remediate, as applicable, inactive sites and facilities contaminated as the result of historic DOE nuclear testing activities conducted at the Nevada Test Site (NTS), Tonopah Test Range (TTR), Nellis Air Force Range (NAFR) in Nevada, and eight other locations in five states: Alaska (Amchitka Island), Colorado (Rulison and Rio Blanco), Mississippi (Salmon), Nevada (Central Nevada Test Area and Project Shoal), and New Mexico (Gas buggy and Gnome Coach). The DOE/NV EM mission at the NTS also include the treatment, storage, and/or disposal of radioactive low-level waste (LLW), mixed low-level waste (MLLW), transuranic waste (TRU), mixed transuranic waste (MTRU), hazardous legacy wastes, and wastes generated as the result of DOE activities across the complex.

The DOE/NV EM mission is significant since radioactive contamination associated with the mission is the result of approximately 1,054 historical above-ground and below-ground nuclear tests which were conducted primarily at the NTS. The NTS is located 65 miles northwest of the city of Las Vegas and encompasses 1,350 square miles, an area roughly the size of Rhode Island state. Thus, activities are wide-spread, as well as geographically diverse. Additionally, the sources of radioactive contamination have impacted the groundwater of the State of Nevada.

The DOE/NV EM mission is accomplished through a total of ten projectized activities under the 2006 Plan strategy. The six environmental restoration projects (Program Integration, Agreements-in-Principle and Grants, Soils, Underground Test Areas, Industrial Sites, and Off-sites) at DOE/NV are designed to address the Department's legacy of contamination resulting from its nuclear testing activities. Program Integration covers those activities that cut across all project activities such as quality assurance, health and safety, project planning and control, technical and regulatory support, and contractual support. Agreements-in-Principle provides the funding for the state regulatory oversight of project activities and Grants support departmental initiatives. The Soils Project addresses contamination in surface soils, while the Underground Test Areas Project addresses contamination of the subsurface. The Industrial Sites Project addresses contamination resulting from use of support facilities such as leachfields, muck piles, sumps, and injection wells. The Off-sites Project addresses contamination resulting from historic testing activities that

occurred in Alaska, Colorado, Mississippi, Nevada (off the NTS, TTS, and NAFR), and New Mexico.

POST 2006 COMPLETION - DEFENSE - NEVADA (cont'd)

I. Mission Supporting Goals and Objectives:

MISSION (cont'd)

The four waste management projects (Program Management, MLLW, TRU/MTRU, LLW) at DOE/NV provide for the treatment, storage, and/or disposal of legacy waste currently on-site and waste generated by EM activities across the DOE complex. Program management covers all DOE/NV's waste management cross-cutting requirements including regulatory compliance, project planning and control, quality assurance, health and safety, and technical support. The TRU/MTRU Project will characterize and prepare stored waste at the NTS for shipments to the Waste Isolation Pilot Plant (WIPP) facility in New Mexico. The MLLW and LLW Projects provide treatment, storage and/or disposal of on-site and off-site waste for the DOE complex and some DOD generators.

The DOE/NV will continue to work to keep the site support cost expenditures at the goal of 30 percent of the site's total EM costs. In FY 1998, approximately 11 percent of budget work will be accomplished through fixed price task order and contracts. Use of fixed price contracts in FY 1999 will continue at the FY 1998 rate. Efficiencies will be built into the next iteration of site baselines and will target 3 percent for most projects and 6 percent for the low-level waste operational project. Program management costs are already less than 17 percent of the total DOE/NV EM budget.

2006 PLAN STRATEGY

For contaminated surface sites outside the NTS boundaries, the goal is to characterize, remediate, and restore the surface areas for unrestricted use by the end of 2006. Institutional control of the subsurfaces will be retained by the DOE, and the groundwater will be monitored to ensure there is no risk to the public. It is assumed acquisition of additional subsurface rights will be required to ensure protection against inadvertent penetration of the subsurface by entities outside the DOE. Because groundwater contaminants at some sites may have migrated beyond the boundary of areas owned or previously administered by DOE, and because of the nature and extent of contamination in the subsurface, long-term surveillance and monitoring of the sites is planned for up to 100 years.

For areas within boundaries of the NTS, the goal is to complete site characterization and remediation of as many sites as possible by FY 2006. Project completions will be reevaluated and scopes, costs and schedules adjusted annually to reflect the impact of outyear funding levels.

POST 2006 COMPLETION - DEFENSE - NEVADA (cont'd)

I. Mission Supporting Goals and Objectives:

2006 PLAN STRATEGY (cont'd)

The DOE's Waste Management (WM) Programmatic Environmental Impact Statement (PEIS) Record of Decision (ROD) may require changes to the DOE/NV WM scope as currently planned. DOE/NV WM activities include continued operation of the LLW disposal facility; mixed waste treatment, storage and/or disposal through 2007; operation of the TRU/MTRU waste examination facility- with final shipments to WIPP by FY 2003; Performance Assessments under the LLW Maintenance Program (DOE Order 5820.2A) and the TRU Program (40 CFR 19) to verify waste management system performance compliance and safe disposal; Site characterization and monitoring system development/installation to ensure an adequate understanding and determine long-term suitability of waste disposal sites; development of Waste Acceptance Criteria, audits of waste generator programs to ensure that generators are performing in accordance with established criteria; and construction projects to support waste management activities.

FY 1999 PROGRAM

In FY 1999, DOE/NV EM will conduct characterization and remediation activities at contaminated soil sites on the Tonopah Test Range, Nellis Air Force Range, and on the Nevada Test Site. Other activities include modeling of underground test areas and drilling of four of the eight wells required to support data gaps in the Western Pahute Mesa CAU-specific model. Environmental Management will also continue to characterize, segregate, and repackage the TRU/Mixed TRU at the Waste Examination Facility in preparation for shipping the waste to WIPP for disposal. Environmental Management will continue to dispose low-level waste, and treat, store and/or dispose of mixed low-level waste at the NTS.

POST 2006 COMPLETION - DEFENSE - NEVADA (cont'd)

I. Mission Supporting Goals and Objectives:

COMPLIANCE ORDERS

A Federal Facilities Agreement and Consent Order (FFACO) between the State of Nevada, Division of Environmental Protection (State), DOE/NV, and the Defense Special Weapons Agency (which has release sites on the NTS) governs environmental restoration activities on the NTS, TTR, DOE sites on the NAFR, and the two off-site test areas in Nevada. The States of Alaska, Colorado, Mississippi, and New Mexico guide monitoring and restoration activities at sites in those states. Other legal drivers governing remedial action at DOE/NV sites include RCRA, CERCLA, the Atomic Energy Act, and applicable state laws. The DOE/NV environmental restoration program is comprised of 2,396 release sites and eight facilities. In FY 1999, 446 release sites are scheduled for completion.

Under a State settlement agreement, DOE/NV stores 672 cubic meters of TRU/Mixed TRU waste on the transuranic waste pad at NTS, pending opening of the Waste Isolation Pilot Plant in Carlsbad, New Mexico. The characterization, segregation, and re-packaging of the TRU/Mixed TRU at the Waste Examination Facility will begin this fiscal year in preparation for shipping the waste to WIPP for disposal. Milestones for mixed low-level waste and mixed TRU waste are designated in the FFCA Act and the Mutual Consent Agreement. An interim Resource Conservation and Recovery Act (RCRA) Part B permit allows MLLW generated on-site to be disposed in Pit 3 at NTS. From 1981 to 1989, a series of boreholes, referred to as the Greater Confinement Disposal (GCD) boreholes, were used at the NTS to dispose of TRU, Mixed TRU, and low-level radioactive wastes considered unsuitable for shallow land burial. Of the thirteen GCD boreholes constructed, six have been operationally closed. Use of GCD boreholes has been on hold until the regulatory issue concerning the possible classification as injection wells by the State of Nevada is resolved. Performance assessment and closure data collection related to GCD boreholes is continuing in order to meet completion requirements per Code of Federal Regulation (40 CFR 191).

POST 2006 COMPLETION - DEFENSE - NEVADA (cont'd)

II. Funding Schedule:

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Remedial Action/Release Sites	\$ 46,686	\$ 41,938	\$ 48,269	\$+6,331	+15%
Facility Decommissioning	50	433	595	+162	+37%
Long-Term Monitoring	400	500	500	0	0%
Transuranic Waste	1,027	3,312	5,792	+2,480	+75%
Mixed Low-Level Waste	0	1,028	402	-626	-61%
Low-Level Waste	12,839	7,172	6,011	-1,161	-16%
Program Support	<u>12,042</u>	<u>15,212</u>	<u>12,431</u>	<u>-2,781</u>	<u>-18%</u>
 TOTAL, Nevada	 <u>\$ 73,044</u>	 <u>\$ 69,595</u>	 <u>\$ 74,000</u>	 <u>\$ +4,405</u>	 <u>+6%</u>

POST 2006 COMPLETION - DEFENSE - NEVADA (cont'd)

III. Performance Summary - Accomplishments:

[PBS Numbers are Bracketed in the Text]

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites

Conduct activities at Contaminated Soils Sites on Tonopah Test Range, Nellis Air Force Range, and Nevada Test Site. [NV-211]

\$14,280

\$1,850

\$6,103

- In FY 1997:
 - Completed Closure Report (CR) for Double Tracks.
 - Completed characterization studies at Clean Slate 1 to evaluate and select the appropriate Corrective Action, and completed Clean Slate 1 Corrective Action Decision Document (CADD) and Corrective Action Plan (CAP).
 - Completed Characterization field activities at Clean Slate Sites 2 & 3.
- In FY 1998:
 - Continue site restoration of Clean Slate 1 Plutonium Dispersion.
 - Complete Characterization Report of Clean Slate 2 Plutonium Dispersion.
 - Continue Assessment of Project 57.
 - Continue to evaluate new and innovative technologies for remediating contaminated soils.
- In FY 1999:
 - Complete Closure Report of Clean Slate 1 Plutonium Dispersion.
 - Initiate Site Remediation of Clean Slate 2 Plutonium Dispersion.
 - Continue to evaluate new and innovative technologies for remediating contaminated soils.
 - Complete Assessment (CADD) of Project 57.

POST 2006 COMPLETION - DEFENSE - NEVADA (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Carry out Underground Test Area Remediation Activities [NV-212]	\$16,025	\$20,914	\$27,791
• In FY 1997:			
- Began Frenchman Flat Source Term Model.			
- Defined Frenchman Flat modeling approach; completed Frenchman Flat CAIP.			
- Began Western Pahute Mesa Value of Information Analysis (VOIA).			
- Completed sampling of five existing wells.			
- Completed the Bullion Forced Gradient Experiment.			
- Continued ongoing aquifer recharge and discharge studies.			
- Began Western Pahute Mesa Corrective Action Unit (CAU)-specific geologic model.			
- Completed Regional Groundwater Model report; completed Frenchman Flat VOIA report.			
• In FY 1998:			
- Complete sampling of five existing wells.			
- Complete Frenchman Flat Contaminant Boundary Modeling.			
- Complete Western Pahute Mesa Draft CAIP.			
- Continue Groundwater Recharge/Discharge studies.			
- Submit Final Bullion Forced Gradient Experiment (FGE) Report.			
- Begin Geochemical Modeling.			
- Begin Yucca Flat CAU-specific Geologic Model.			
- Complete Western Pahute Mesa CAIP.			
• In FY 1999:			
- Begin installation of four deep groundwater monitoring wells for monitoring contaminated groundwater flow toward Oasis Valley from NTS.			
- Complete Frenchman Flat CADD.			
- Begin Frenchman Flat Monitoring Network Design.			
- Complete Frenchman Flat Contaminant Boundary Report.			

POST 2006 COMPLETION - DEFENSE - NEVADA (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Conduct Industrial Site Remedial Actions on the NTS and TTR [NV-214]	\$7,456	\$10,205	\$7,712
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Completed final CADD for 2nd Gas Station, TTR. - Completed Corrective Action Investigation (CAI) Field Work for Area 3 Landfill Complex, TTR. - Completed final CADD and CAP for Cactus Spring Waste Trenches, and for Roller Coaster Sewage Lagoons, TTR. - Completed final CAIPs for Areas 2 & 6 Septic Waste Systems and for Building 360 Underground Discharge Point, TTR. - Completed final CR for Bomblet Pit/Five Points Landfill, TTR. - Completed CAI Field Work for Area 9 UXO Landfill, TTR. - Completed final Closure for Area 2 Bitcutter/Postshot Shops Waste Unit. - Completed final Characterization of Area 6 Decon Pond Facility. - Completed final Contract Laboratory Program (CLP) for Area 6 Steam Cleaning Effluent Ponds. - Completed Closure Field Work for Area 6 Steam Cleaning Effluent Ponds. - Completed Field Work and final Characterization for Building 650 Leachfield. • In FY 1998, will start and complete: <ul style="list-style-type: none"> - Submit 4 Final Closure Reports for multiple underground storage tank sites. - Submit 5 Final Closure Reports for 3 sites on NTS and 2 sites on Tonopah Test Range. - Submit Final Characterization Plan for Area 2 U26u Subsidence Crater. - Submit Final Corrective Action Plan for Area 3, Building 360 UDP, TTR. 			

POST 2006 COMPLETION - DEFENSE - NEVADA (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Conduct Industrial Site Remedial Actions on the NTS and TTR (cont'd)			
• In FY 1999, will start and complete:			
- Submit Final Assessment Report (CADD) for 3 sites on Tonopah Test Range.			
- Submit Final Closure Report for 4 sites on NTS.			
- Submit Final Closure Report for Area 3, Building 360 UDP, TTR.			
- Submit Final Closure Report for Area 23, Building 800 Pesticide Release, NTS.			
Conduct Remedial Activities at Off-site Locations [NV-240]	\$8,925	\$8,969	\$6,663
• In FY 1997:			
- AMCHITKA ISLAND, ALASKA: Prepared a preliminary characterization report, a Remedial Investigation/Feasibility Study work plan, a preliminary risk assessment, and performed site characterization.			
- PROJECT SALMON SITE, MISSISSIPPI: Continued site characterization and groundwater remediation activities; began remediation of Reynolds Engineering and Electric Company (REECo) and surface ground zero pits.			
- PROJECT GASBUGGY SITE, NEW MEXICO: Conducted groundwater characterization in well 10-36; sampled a nearby gas company well.			
- PROJECT RULISON SITE, COLORADO: Continued annual monitoring.			
- PROJECT RIO BLANCO, COLORADO: Continued annual monitoring.			
- CENTRAL NEVADA TEST AREA, NEVADA: Continued annual monitoring; removed debris; prepared surface CADD; prepared subsurface CAIP.			
- PROJECT SHOAL TEST AREA, NEVADA: Continued annual monitoring; performed characterization of 3 mud pits; prepared SAFER plan; characterized one soil disposal site.			

POST 2006 COMPLETION - DEFENSE - NEVADA (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites (cont'd)

Conduct Remedial Activities at Off-site Locations (cont'd)

- In FY 1998:
 - AMCHITKA ISLAND, ALASKA: Prepare surface and subsurface CAIP.
 - PROJECT SALMON SITE, MISSISSIPPI: Prepare feasibility study; continue groundwater remediation modeling activities; remove surface ground zero mud pits (Safer).
 - PROJECT GASBUGGY SITE, NEW MEXICO: Prepare surface and subsurface CAIP; begin surface CADD.
 - PROJECT GNOME-COACH SITE, NEW MEXICO: Prepare surface and subsurface CAIP; Begin surface CADD.
 - PROJECT RIO BLANCO, COLORADO: Continue annual monitoring.
 - CENTRAL NEVADA TEST AREA, NEVADA: Continue groundwater remediation modeling activities; Prepare CAIP for new CAU: Begin surface CADD.
 - PROJECT SHOAL TEST AREA, NEVADA: Submit surface SAFER Closure Report, Submit surface CADD.
- In FY 1999:
 - AMCHITKA ISLAND, ALASKA: Complete groundwater modeling effort; submit subsurface CADD.
 - PROJECT SALMON SITE, MISSISSIPPI: Complete Feasibility Study for the subsurface; prepare Record of Decision for the subsurface.
 - PROJECT GASBUGGY SITE, NEW MEXICO: Complete groundwater modeling effort; begin preparation of the subsurface CADD; begin preparation of the surface CADD.
 - PROJECT GNOME-COACH SITE, NEW MEXICO: Complete groundwater modeling effort; complete surface CADD.

POST 2006 COMPLETION - DEFENSE - NEVADA (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Conduct Remedial Activities at Off-site Locations (cont'd)			
• In FY 1999: (cont'd)			
- PROJECT RIO BLANCO, COLORADO: Complete surface and subsurface CAIP; begin preparation of the surface CADD; continue groundwater modeling effort.			
- CENTRAL NEVADA TEST AREA, NEVADA: Prepare subsurface CADD.			
- PROJECT SHOAL TEST AREA, NEVADA: Complete surface SAFER; complete subsurface CAP.			
Assessments			
• In FY 1997, completed 0 assessment sites.			
• In FY 1998, will complete 26 assessment sites.			
• In FY 1999, will complete 10 assessment sites.			
Cleanups			
• In FY 1997, completed 7 cleanup/release sites.			
• In FY 1998, will complete 14 cleanup/release sites.			
• In FY 1999, will complete 18 cleanup/release sites.			
Subtotal, Remedial Action/Release Sites	\$ 46,686	\$ 41,938	\$ 48,269
<u>Facility Decommissioning</u> [PBS NV-214]	\$50	\$433	\$595
• In FY 1997:			
- Completed Field Work at Engine Maintenance and Disassembly (EMAD) Facility.			
- Completed Final Characterization Report EMAD Facility.			

POST 2006 COMPLETION - DEFENSE - NEVADA (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facility Decommissioning</u> (cont'd)			
• In FY 1998:			
- Start and complete CAIP, start CADD Area 25 E-MAD Train Decontamination Area.			
- Start and complete CAIP, start CADD Area 25 R-MAD Decontamination Facility.			
- Start and complete CAIP.			
- Start CADD Area 25 Test Cell A Facility.			
• In FY 1999:			
- Complete CADD/CR Area 25 E-MAD Train Decontamination Area.			
- Complete CADD/CR Area 25 R-MAD Decontamination Facility.			
- Complete CAIP and CADD.			
- Start CAP Area 25 Test Cell C Facility.			
Assessments			
• In FY 1997, one assessment was completed.			
• In FY 1998, four assessments will be completed.			
• In FY 1999, one assessment will be completed.			
Cleanups			
• In FY 1997, 0 cleanup were completed			
• In FY 1998, 0 cleanups will be completed.			
• In FY 1999, 2 cleanups will be completed.			
Subtotal, Facility Decommissioning	\$ 50	\$ 433	\$ 595

POST 2006 COMPLETION - DEFENSE - NEVADA (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Long-Term Monitoring</u> [NV-240]	\$ 400	\$ 500	\$ 500
Perform subsurface monitoring activities at off-site locations in all years.			
Subtotal, Long-Term Monitoring	<u>\$ 400</u>	<u>\$ 500</u>	<u>\$ 500</u>
 <u>Transuranic Waste</u> [PBS NV-350]	 \$1,027	 \$3,312	 \$5,792

Continue to provide a covered pad storage facility at the NTS for transuranic (TRU) and mixed transuranic (MTRU) waste under a State Settlement Agreement. Perform characterization, segregation, and repackaging of the TRU/Mixed TRU waste in anticipation of shipping this disposal ready TRU/Mixed TRU waste to WIPP in New Mexico for ultimate disposal. Update FFC Act Consent Order and Site treatment Plan. Planning and data gathering activities related to the performance assessment per 40 CFR 191, and closure of the NTS's Greater Confinement Disposal (GCD) boreholes has been in progress since 1989 to meet completion requirements for TRU/Mixed TRU waste disposal which has been accepted for disposal in GCD.

- FY 1997:
 - Completed construction (GPP) and began production test operations of Waste Examination Facility (WEF) that would be used to provide for characterization and repackaging of stored TRU/Mixed TRU waste at NTS.
 - Continued to provide safe storage for existing TRU/Mixed TRU waste.
 - Completed GCD climate change report associated with performance assessment.

POST 2006 COMPLETION - DEFENSE - NEVADA (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Transuranic Waste (cont'd)

- FY 1998:
 - Initiate characterization and repackaging of TRU/Mixed TRU waste in WEF.
 - Procure a radiography system to examine the TRU/Mixed TRU waste.
 - Finalize the following report associated with GCD: Plant Uptake Methodology Report, Individual Protection Requirements Methodology, Climate Change Methodology, Source Term for GCD/buried TRU waste, and Upward Advection Model.
- FY 1999:
 - Continue with characterization and repackaging of TRU/MTRU waste in WEF.
 - Completed radiography, radioassay, and headspace gas sampling of approximately 30 percent of TRU/MTRU waste.
 - Finalize the following report associated with GCD: Assurance Requirements Package, Disruptive Scenario Report, Consequences of LLW Subsidence Model, Nuclear Criticality Report.

Treatment

- In FY 1997, 0 cubic meters of TRU/MTRU was treated.
- In FY 1998, 15 cubic meters of TRU/MTRU will be treated.
- In FY 1999, 150 cubic meters of TRU/MTRU will be treated.

Storage

- In FY 1997, 672 cubic meters of TRU/MTRU was stored.
- In FY 1998, 672 cubic meters of TRU/MTRU will be stored.
- In FY 1999, 672 cubic meters of TRU/MTRU will be stored.

POST 2006 COMPLETION - DEFENSE - NEVADA (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Transuranic Waste</u> (cont'd)			
Subtotal, Transuranic Waste	\$ 1,027	\$ 3,312	\$ 5,792

Disposal

- In FY 1997, 0 cubic meters of TRU/MTRU was disposed.
- In FY 1998, 0 cubic meters of TRU/MTRU will be disposed.
- In FY 1999, 0 cubic meters of TRU/MTRU will be disposed.

<u>Mixed Low-Level Waste</u> [PBS NV-360]	\$0	\$1,028	\$402
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Characterize, treat and/or dispose on-site and/or legacy MLLW and meeting requirements of the FFC Act and Mutual Consent Agreement with the State of Nevada. Completed annual update of NTS Site Treatment Plan. Submitted treatment and disposal plan for each newly generated MLLW stream to the State of Nevada.

- In FY 1997, treated and/or disposed TTF solvent, PCB Soils, A-12 Solvent Sludge, MW Cotter Concentrate Population B, and the Bulk Lead Waste schedule. The EM Technology Development Program's Mixed Waste Focus Area provided Nevada Office \$500,000 for specialize packaging and transporting the Cotter Concentrate to off-site private contractor for its ultimate treatment and disposal. All other MLLW support work will continue.
- In FY 1998, ship lead contaminated soil to off-site treatment and disposal facility. All other MLLW support work will continue.
- In FY 1999, ship TTF Solvent and PCB contaminated rags to the Toxic Substances Control Act Incinerator at Oak Ridge for treatment and eventual disposal. All other MLLW support work will continue.

POST 2006 COMPLETION - DEFENSE - NEVADA (cont'd)

III. Performance Summary - Accomplishments:

Mixed Low-Level Waste (cont'd)

FY 1997

FY 1998

FY 1999

Treatment

- In FY 1997, 288 cubic meters of MLLW was treated.
- In FY 1998, 11.7 cubic meters of MLLW will be treated.
- In FY 1999, 0 cubic meters of MLLW will be treated.

Storage

- In FY 1997, 21 cubic meters of MLLW was stored.
- In FY 1998, 15.2 cubic meters of MLLW will be stored.
- In FY 1999, 0.3 cubic meters of MLLW will be stored.

Disposal

- In FY 1997, 21 cubic meters of MLLW was disposed.
- In FY 1998, 2.6 cubic meters of MLLW will be disposed.
- In FY 1999, 0 cubic meters of MLLW will be disposed.

Subtotal, Mixed Low-Level Waste

\$ 0

\$ 1,028

\$ 402

POST 2006 COMPLETION - DEFENSE - NEVADA (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Low-Level Waste</u> [PBS NV-370]	\$12,839	\$7,172	\$6,011

Accomplish the cradle-to-grave tasks from the acceptance of waste through the closure of waste disposal units at the NTS. This includes the auditing, acceptance, and disposal of LLW. Supporting tasks include the on-site waste generator project, the integrated closure project, base operations, technical support, routine site monitoring, performance assessments, site characterization, data management, permitting and NEPA requirements for specific projects, General Plant Projects and Capital Equipment.

- FY 1997:
 - Continued to dispose LLW at the NTS Areas 3 and 5 Radioactive Waste Disposal Sites. All other LLW support work will continue.
 - Constructed pit for asbestos-contaminated LLW.
 - Completed final Performance Assessment for the Area 5 LLW disposal site.
 - Completed preliminary RCRA Closure Plan for the test hole crater (U3ax/bl) waste cell at the Area 3 LLW disposal site.
 - Continued with closure cap design.
 - Conducted five waste generator facility evaluations.
- FY 1998:
 - Continue to dispose LLW. All other LLW support work will continue.
 - Complete Composite Analysis for Area 5 disposal site and Geology Report for Area 3 disposal site.
 - Reevaluate Inadvertent Human Intruder Scenario.
 - Initiate Title I design of the test hole crater (U3ax/bl) Closure Cap, the Area 3 disposal unit.

POST 2006 COMPLETION - DEFENSE - NEVADA (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Low-Level Waste</u> (cont'd)			
<ul style="list-style-type: none">• FY 1999:<ul style="list-style-type: none">- Continue to dispose LLW. All other LLW support work will continue.- The Composite Performance Assessment for Area 5, the Area 3 PA/CA, and Area 5 PA Addendum will be completed and submitted for peer review panel approval.- Initiate Title II design of the test hole crater (U3ax/bl) Closure Cap and finalize the closure plan.			
Disposal			
<ul style="list-style-type: none">• In FY 1997, 24,024 cubic meters of LLW was disposed.• Received in FY 1997: Off-site LLW - 19,556 cubic meters; on-site waste 4,468 cubic meters.• In FY 1998, 13,982 cubic meters of LLW will be disposed.• Received in FY 1998: Off-site LLW - 1,568 cubic meters; on-site waste 12,414 cubic meters.• In FY 1999, 37,742 cubic meters of LLW will be disposed.• Received in FY 1999: Off-site LLW - 20,671 cubic meters; on-site waste 17,071 cubic meters.			
Subtotal, Low Level Waste	\$ 12,839	\$ 7,172	\$ 6,011

POST 2006 COMPLETION - DEFENSE - NEVADA (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Program Support</u> [PBS NV-201, NV-202, NV-330]	\$12,042	\$15,212	\$12,431
<p>In all years, provides for: Program Support/AIP/Grants including the site strategic and program planning and integration as well program management and control including the Draft 2006 Plan, Environmental Restoration and Waste Management Plans, Strategic Plan, project and cost control system; community/stakeholders workshops regarding DOE/EM activities and budget in Nevada; training; develop/update safety and health documentation for Waste Management Sites, Operation & Maintenance Plan, and Contingency Plan; quality assurance and self-assessment; Maintenance of a Performance Measurement System to support the Government Performance Results Act; cost estimates reviews and cost validations; Grant/AIP support to States of Nevada, Alaska, and Mississippi, and Citizen Advisory Board; and educational and research opportunities support within the University of Nevada system.</p>			
Subtotal, Program Support	<u>\$12,042</u>	<u>\$15,212</u>	<u>\$12,431</u>
TOTAL, NEVADA	<u>\$73,044</u>	<u>\$69,595</u>	<u>\$74,000</u>

POST 2006 COMPLETION - DEFENSE - NEVADA (cont'd)

Explanation of Funding Changes From FY 1998 to FY 1999:

Remedial Action/Release Sites: Increase is for initial funding for drilling of four wells to meet state requirements for additional data for characterizing subsurface contamination at the NTS. +\$6,331

Facility Decommissioning: Initiate cleanup at Area 25 Test Cell C Facility. +\$162

Transuranic Waste: Additional funding is for a significant acceleration of the TRU project. +\$2,480

Mixed Low-Level Waste: Decrease in funding is because most MLLW currently in storage will be disposed by FY 1999. -\$626

Low-Level Waste: Decrease in funding reflects reallocation of funds from FY 1998 to FY 1999 for acceleration of characterization and other tasks in the TRU program in order to achieve completion by 2003. -\$1,161

Program Support: The decrease in program support is the result of fewer RCRA permit modifications, a realignment of some waste management regulatory activities to the projects they directly support, and the redistribution of support to the University of Las Vegas/Harry Reid Center. -\$2,781

Total Funding Change, Nevada **+\$4,405**

POST 2006 COMPLETION - DEFENSE

OAK RIDGE

I. Mission Supporting Goals and Objectives:

MISSION

The Oak Ridge Operations Office (OR) directs and monitors environmental restoration, waste management operations, and materials stabilization activities within the Oak Ridge Reservation (ORR) and several off-site properties contaminated by the Oak Ridge facility operations in Tennessee. The ORR encompasses 37,000 acres and is comprised of three facilities; the Y-12 Plant, which was a uranium processing facility, which dismantles nuclear weapons components and serves as the nation's storehouse of special nuclear materials; the East Tennessee Technology Park (ETTP) (formerly K-25), which was a uranium enrichment facility, and is being transitioned through reindustrialization; and, the Oak Ridge National Laboratory (ORNL) which conducts applied and basic research in energy technologies and the physical and life sciences. Spent nuclear fuel (SNF) containing 0.25 metric tons of heavy metal is currently in storage at ORNL, awaiting transfer to the Idaho National Engineering and Environmental Laboratory (INEEL) and the Savannah River Site (SRS). The Waste Management (WM) Program manages transuranic (TRU), mixed low-level, low-level, hazardous and sanitary and industrial waste at the three ORR facilities. Not on the reservation, but contaminated due to reservation operations there are several off-site release sites including the Lower East Fork Poplar Creek (LEFPC), the Clinch River/Poplar Creek, the Atomic City Auto Parts, the Oak Ridge Tool and Engineering Site and the David Witherspoon Site. All waste types are stored, treated, and disposed in compliance with regulations.

2006 STRATEGY

The 2006 strategy at the OR will have all legacy transuranic and mixed waste treated and disposal-ready by FY 2006, will have all legacy low-level waste disposed by FY 2013, and will have all remedial action sites completed by FY 2012. All spent nuclear fuel will be shipped to INEEL and SRS for long-term storage by 2003. By FY 2006, 95 percent of all legacy mixed waste will be treated and disposed and 60 percent of legacy low-level waste will be disposed. Additionally, OR is involved in innovative technology demonstrations to identify more effective and efficient ways to treat waste. Cleanup of remedial action sites will be accelerated completing much more work by FY 2006 than previously planned in the BEMR. Remedial actions that will be completed include the ORNL gunite tanks, cleanup of off-site properties, and an 85 percent reduction in the EM footprint of the ORR. These activities assume a cumulative enhanced performance efficiency of about 30 percent through FY 1999.

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

I. Mission Supporting Goals and Objectives:

FY 1999 PROGRAM

In FY 1999, legacy waste and remedial activities will be progressing towards the goals identified above. Some of the specific activities include initiate construction on the Upper East Fork Poplar Creek (UEFPC) East End Dense Non-Aqueous Phase Liquid (DNAPL), complete construction of the UEFPC firing range, start construction of the Bear Creek Valley Hotspot Removal, initiate activities for the corehole eight plume source, begin cleanup of the Atomic City Auto Parts site, complete Phase 2 remediation of the LEFPC project, and continue high priority D&D and S&M activities. The WM Program has preparations underway to repackage all ORR contact handled (CH) and remote handled (RH) TRU waste for disposal in the Waste Isolation Pilot Plant (WIPP). Under a privatization contract, mixed low-level waste will be treated in the Toxic Substance Control Act (TSCA) incinerator and under a private sector Broad Spectrum Procurement contract and disposed. Solid low-level waste will be treated and disposed. Hazardous waste and sanitary and industrial waste will continue to be treated and disposed as generated in FY 1999. The spent fuel shipments to SRS will be completed in FY 1999. Twenty-eight canisters of spent fuel will be shipped to INEEL. Additional details are identified under Section III. A combined total of 205 remedial action assessments and 32 remedial action cleanups will be completed on the Oak Ridge Reservation in FY 1999, using the defense and non-defense appropriations.

COMPLIANCE DRIVERS

Cleanup at the Oak Ridge Reservation is regulated under a recently executed tri-party Federal Facilities Agreement (FFA) with the U.S. EPA Region IV and the State of Tennessee. This agreement contains three years of rolling milestones for the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) activities. The ORR waste management activities are managed under Federal and State regulations and requirements including the FFA, the Resource Conservation and Recovery Act/Land Disposal Restrictions (RCRA/LDR), the Toxic Substances Control Act (TSCA), and DOE Orders. All activities are monitored through performance based milestones. All waste types are treated, stored, and disposed in compliance with regulations.

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

II. Funding Schedule:

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Remedial Action/Release Sites	\$ 24,320	\$ 37,464	\$ 28,261	\$ -9,203	-25%
Facility Decommissioning	3,873	5,015	3,845	-1,170	-23%
Transuranic Waste	15,294	11,010	12,301	+1,291	+12%
Mixed Low-Level Waste	87,530	75,284	63,167	-12,117	-16%
Low-Level Waste	50,784	49,483	44,494	-4,989	-10%
Hazardous Waste	4,270	6,904	5,135	-1,769	-26%
Other Waste	6,976	13,374	10,794	-2,580	-19%
Spent Nuclear Fuel Stabilization	2,379	2,021	3,553	+1,532	+76%
Landlord	10,693	5,944	5,899	-45	-1%
Long-Term Monitoring	14,959	0	0	0	N/A
Program Support	<u>24,677</u>	<u>15,800</u>	<u>5,534</u>	<u>-10,266</u>	<u>-65%</u>
 TOTAL, Oak Ridge	 <u>\$245,755</u>	 <u>\$222,299</u>	 <u>\$182,983</u>	 <u>\$-39,316</u>	 <u>-18%</u>

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u>			
Carry out activities at the Y-12 East Fork Poplar Creek [OR-42101]	\$9,248	\$17,170	\$9,988
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Completed the Filled Coal Ash Pond remedial action. - Received approval on the Remedial Action Report. - Issued the Upper East Fork Poplar Creek (UEFPC) Remedial Investigation (RI) Sediment Sampling and Analysis Plan to fill an important data gap in the preparation of the RI/Feasibility Study (FS) documentation. - Prepared the RI Report in 1997, but approval will not be achieved until FY 1998. - Completed the installation of the Lake Reality Bypass and the design of the Air Stripping Facility in the Reduction of Mercury in Plant Effluent (RMPE) project. - Prepared and received approval of the Action Memorandum and Removal Action Work Plan for Building 9201-4 Outside Piping Removal and completed the remedial action. - Prepared and received approval on the Interim Record of Decision (ROD) for Union Valley. - Issued to the regulators for approval the Action Memorandum for the UEFPC Firing Range Soil. • In FY 1998: <ul style="list-style-type: none"> - Continue work for the implementation of the RMPE Air Stripping Mercury Treatment Facility and on the permanent Lake Reality Bypass. - Issue and approve the UEFPC RI Report, intensify work on the UEFPC Watershed. - Propose implementation of early actions in the East End Dense Non Aqueous Phase Liquid (DNAPL) activity and one soil remediation project are contingent upon 1998 approval of an early action EE/CA, a Removal Action Work Plan and an Action Memorandum. 			

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Carry out activities at the Y-12 East Fork Poplar Creek (cont'd)			
• In FY 1998: (cont'd)			
- Complete Building 9201-4 Outside Piping Removal Action associated documentation.			
• In FY 1999:			
- Issue for approval the UEFPC Watershed FS and the Proposed Plan.			
- Receive approval on the UEFPC East End DNAPL early Action Memorandum and Removal Action Work Plan and initiate construction.			
- Complete construction on the UEFPC Firing Range Soil Remediation project.			
- Issue for approval a Removal Action Report.			
- An Action Memorandum for the UEFPC Salvage Yard Soil early Action project will be issued for approval.			
Carry out activities at the Y-12 Bear Creek [OR-42102]	\$1,007	\$4,298	\$9,822
• In FY 1997:			
- Issued for approval from the Tennessee Department of Environmental Control (TDEC) and EPA the Bear Creek Valley RI Report.			
- Issued for regulatory review the Bear Creek Watershed FS Report.			
- Completed phase 1 and continued Phase 2 of the in situ surface water treatability study as a subproject in the Watershed ROD project and a precursor to the Bear Creek Tributary Interception early Action and forecast remedial Action projects. Iron filings, sorptive media, wetlands, and phytoremediation technologies were evaluated as reactive media to be placed in trenches. In the early Action project, trenches were to be located to intercept shallow groundwater plumes from the S-3 site prior to the discharge of the plumes into Bear Creek or its tributaries.			

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites (cont'd)

Carry out activities at the Y-12 Bear Creek (cont'd)

- In FY 1997: (cont'd)
 - Initiated an Action Memorandum decision document preparation for an early Action in the Bear Creek Watershed (Bear Creek Valley SW/GW Diversion Trench). This Action was to divert clean water around buried waste preventing leachate production.
 - ROD for Bear Creek Operable Unit 2 remedial action was approved. Post ROD requirements for existing cap inspections and water monitoring.
 - Issued FY 1996 S&M Report on D&D and RA activities at the Y-12 Plant.
- In FY 1998:
 - Initiate decision document preparation for two early actions in the Bear Creek Watershed (Bear Creek Valley Floodplain Hotspot Removal and Bear Creek Valley Tributary Interception (S-3 Plume)).
 - Design collection trenches and/or a horizontal well in the Tributary Interception project, building on the information gained from the treatability study.
 - Began an early Action of upgradient, diversion trenching in the Bear Creek Burial Grounds. With approval of the Action Memorandum and the Removal Action Workplan in early FY 1998, construction should begin on the diversion trenching by mid-year FY 1998.
 - Receive approval of the Bear Creek Watershed FS Report and Proposed Plan.
- In FY 1999:
 - Issue the Draft 1(D1) version of the ROD and Watershed Remedial Design Work Plan for the Bear Creek watershed project.
 - Continue the design to support the remedial Action (first Action following the ROD) Boneyard/Burnyard in the Burial Grounds project.
 - Start construction in the Bear Creek Valley Floodplain Hotspot Removal.

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Carry out activities at the Y-12 Bear Creek (cont'd)			
• In FY 1999: (cont'd)			
- Start and complete construction in the Bear Creek Valley Tributary Interception (S-3 Plume) early Action.			
- Complete construction in the Bear Creek Valley Diversion Trench early Action project and issue the Removal Action Report for approval.			
Carry out activities at the ORNL Melton Valley (formerly White Oak Creek) [OR-43201]	\$2,569	\$0	\$0
• In FY 1997:			
- Completed and sent to the regulators, for review and comment, the Melton Valley Watershed FS. This FS will lead to a FY 1999 ROD that was to establish the end state for the remediation of the Melton Valley area at ORNL and was to define the projects necessary to reach that end state. This ROD formally established, in a legal document, the requirements for completion of ER activities in the Melton Valley area of ORNL.			
- Completed the grouting of selected buried waste trenches at SWSA 4 to mitigate migration of contamination into Melton Valley.			
- Continued Surveillance and Maintenance (S&M) activities to maintain all of the Remedial Action release sites at ORNL in a safe condition until remediation is completed. These S&M activities included the release sites in Bethel Valley.			
• In FY 1998:			
- Funded under the Non-Defense Appropriation.			
• In FY 1999:			
- Funded under Non-Defense Appropriation.			

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Carry out activities at the ORNL Bethel Valley [OR-43203]	\$7,799	\$903	\$0
• In FY 1997:			
- Completed an investigation to determine the source and extent of the corehole eight plume.			
- Issued and approved the ROD for removal of sludges from eight of the large gunite tanks.			
- Completed the Treatability Study hot tests at the North Tank Farm and operations were initiated to transfer tank waste to a consolidation tank in the South Tank Farm.			
- Initiated modifications to the South Tank Farm facilities to prepare for waste removal and transfer activities.			
- Received approval on a ROD for the remediation of the ORNL Main Plant Surface Impoundments and initiated design.			
- Planned for remediation of additional inactive Liquid Low-Level Waste (LLLW) tanks.			
- Began cold testing of the equipment for sluicing of radioactively contaminated sludges from the OHF tanks.			
- Initiated preparation of the Bethel Valley Watershed RI/FS Report. This RI/FS report led to a ROD in FY 1999 for the remedial Action and D&D activities in Bethel Valley at ORNL.			
- Continued S&M activities to maintain the sites in a safe condition to protect workers and the public; to meet regulations; and to meet DOE orders.			
- Validated treatability study on the use of electric-mechanical arm and a mobile robot to remove sludge and debris from gunite tanks.			
- Updated and issued the Inactive Tanks Strategy Document.			

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites (cont'd)

Carry out activities at the ORNL Bethel Valley (cont'd)

- In FY 1998:
 - Continue sludge removal and transfer activities for the Gunit tanks, and issue Treatability Study addressing sludge removal and tank wall cleaning.
 - Complete sludge removal activities for the OHF tanks, and submit final RA Work Plan.
 - Continue design and initiate field preparation activities for remediation of the ORNL Main Plant Surface Impoundments. Issue EE/CA for 10 inactive LLLW tanks.
 - Initiate a CERCLA removal Action to grout the contaminated soils that are the source of the corehole eight plume and to pump contaminated groundwater from existing wells that intercept the plume to slow migration of the contaminated groundwater. Prepare an EE/CA for the plume source removal action.
 - Continue the preparation of the Bethel Valley Watershed RI/FS Report and submit a draft report to the regulators for review. This RI/FS report will lead to a ROD in FY 1999 for the remedial Action and Decontamination and Decommissioning (D&D) activities in Bethel Valley at ORNL. Remediate additional inactive LLLW tanks.
 - Perform S&M for all of the release sites at ORNL in this subproject.
 - Use of electric mechanical arm and mobile robot to remove sludge and debris from gunit tanks.
- In FY 1999, activities are funded in the Non-Defense Appropriation.

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Carry out activities at the Off-site Remedial Actions [OR-48101]	\$3,697	\$15,093	\$8,451
• In FY 1997:			
- Completed the Clinch River/Poplar Creek D1 version of the ROD and the D3 version of the Remedial Action Work Plan.			
- Completed the field work at the Oak Ridge Tool and Engineering Site and the Western Sewage Digester Site.			
- Implemented the ORR Integrated Water Quality Program.			
- Released 6,000 acres for alternative future use through the Footprint Reduction Project.			
- Completed the ORR Annual Remediation Effectiveness report.			
• In FY 1998:			
- Continue field assessment for the Atomic City Auto Parts and the David Witherspoon Project.			
- Continue the Phase 2 remediation for the Lower East Fork Poplar Creek (LEFPC) Project.			
- Release an additional 6,000 acres for alternative future use through the Footprint Reduction Project.			
- Complete all work at the Oak Ridge Tool and Engineering Site.			
• In FY 1999:			
- Receive approval on the Atomic City Auto Parts Record of Decision and begin the cleanup phase.			
- Complete the Phase 2 remediation on the LEFPC Project; release an additional 10,000 acres for alternative future use through the Footprint Reduction Project.			
- Conduct surface water and biological monitoring to support implementation of remedial action projects as part of the reservation-wide integrated water quality program.			

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

Remedial Action/Release Sites (cont'd)

FY 1997

FY 1998

FY 1999

Performance metrics indicate funding source in parenthesis. For example, in FY 1999 all funding for ORNL is in the Non-Defense account. Previously ORNL activities have been funded by both Defense and Non-Defense appropriations.

Assessments

- In FY 1997, 3 (Defense), 31 (Mixed Defense and Non-Defense)
- In FY 1998, 4 (Defense), 6 (Mixed Defense and Non-Defense)
- In FY 1999, 13 (Defense), 8 (Mixed Defense and Non-Defense)

Cleanups

- In FY 1997, 5 (Defense), 14 (Mixed Defense and Non-Defense)
- In FY 1998, 1 (Defense), 7 (Mixed Defense and Non-Defense)
- In FY 1999, 4 (Defense), 7 (Mixed Defense and Non-Defense)

Subtotal, Remedial Action/Release Sites

\$24,320

\$37,464

\$28,261

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facility Decommissioning</u>			
Carry out activities at the ORNL White Melton Valley Watershed [OR-43202]	\$2,963	\$0	\$0
<ul style="list-style-type: none"> • In FY 1997: Molten Salt Reactor Experiment (MSRE) Project: <ul style="list-style-type: none"> - Began operation of the reactive off-gas system. Since blockages are slowing the removal process, three additional headers were designed and were installed to by-pass known blockages. In a parallel effort, chemical treatment using chlorine trifluoride was planned as a method for opening the blockages. The remainder of reactive gases were removed during FY 1997. - Received approval of the CERCLA/FS for the Fuel Salt Removal and issued for regulator comment the CERCLA Proposed Plan. - Completed the fuel salt removal system conceptual design. - Continued the investigations necessary to assure the feasibility of the selected method of fuel salt removal. The denaturing process was tentatively selected to eliminate the explosive potential of the deposit in the Auxiliary Charcoal Bed (ACB). - Commenced the mock-up testing of the uranium conversion system. • In FY 1998 and FY 1999: <ul style="list-style-type: none"> - Funded under the Non-Defense Appropriation. 			
Carry out activities at the East Tennessee Technology Park (ETTP) [OR-44303]	\$910	\$2,500	\$2,500
<ul style="list-style-type: none"> • In FY 1997 and FY 1998: <ul style="list-style-type: none"> - Activities include routine pre-decommissioning surveillance and monitoring of the centrifuge facilities, which includes facility surveillances of major shutdown facilities to identify unacceptable ES&H conditions, facility maintenance to fix unacceptable ES&H conditions and maintain utility systems; correction of hazardous material leaks, fire protection systems, and facility security, and management of hazardous materials. 			

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facility Decommissioning</u> (cont'd)			
Carry out activities at Y-12 East Fork Poplar Creek [OR-42101]	\$0	\$2,515	\$1,345
• In FY 1998 and FY 1999:			
- Pre-decommissioning surveillance and monitoring support. This activity was previously included in FY 1997 and FY 1998 as long-term surveillance and maintenance.			
Performance metrics indicate funding source in parenthesis.			
Assessments			
• In FY 1997, 1 (Mixed Defense and Non-Defense)			
• In FY 1998, 1 (Mixed Defense and Non-Defense)			
• In FY 1999, 0			
Cleanups			
• In FY 1997, 1 (Mixed Defense and Non-Defense)			
• In FY 1998, 1 Mixed Defense and Non-Defense)			
• In FY 1999, 0			
Subtotal, Facility Decommissioning	\$3,873	\$5,015	\$3,845

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Transuranic Waste</u>			
Perform all necessary activities to compliantly store Oak Ridge National Laboratory transuranic (TRU) waste. Beginning in FY 1998, prepare waste for treatment under the privatization contract. Under this contract all TRU waste will be disposal-ready by FY 2006. [OR-38113]	\$15,294	\$11,010	\$12,301
Treatment			
• In FY 1997, 0 cubic meters were treated.			
• In FY 1998, 0 cubic meters will be treated.			
• In FY 1999, 0 cubic meters will be treated.			
Storage			
• In FY 1997, 2,251 cubic meters was stored.			
• In FY 1998, 2,258 cubic meters will be stored.			
• In FY 1999, 2,265 cubic meters will be stored.			
Disposal			
• In FY 1997, 0 cubic meters were stored.			
• In FY 1998, 0 cubic meters will be stored.			
• In FY 1999, 0 cubic meters will be stored.			
Subtotal, Transuranic Waste	<u>\$15,294</u>	<u>\$11,010</u>	<u>\$12,301</u>

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

Mixed Low-Level Waste

Perform all necessary activities to compliantly store, treat, and dispose of mixed low-level waste generated from three Oak Ridge sites (Oak Ridge National Laboratory, the Y-12 Plant, and the East Tennessee Technical Park (ETTP)). The Toxic Substances Control Act (TSCA) incinerator annually treats about 1,000 m³ (2.5 million lbs) of mixed waste. Privatization commercial contracts will be awarded in FY 1998 to treat up to 36,500,000 kg of legacy mixed waste from across the DOE complex. Treatment is expected to begin in FY 1998. Treatment and disposal of stored legacy mixed waste is expected to be completed by FY 2008, in compliance with the Federal Facilities Compliance Act (Site Treatment Plan - STP). In FY 1997, OR also initiated an innovative technology demonstration of the Transportation Vitrification System (TVS). TVS is a joule heated meter for treating homogeneous waste streams. The demonstration will determine if TVS is viable to treat mixed waste more efficiently and economically.

[OR-38111]

FY 1997

FY 1998

FY 1999

\$87,530

\$75,284

\$63,167

Treatment

- In FY 1997, 2,126 cubic meters were treated.
- In FY 1998, 1,318 cubic meters will be treated.
- In FY 1999, 894 cubic meters will be treated.

Storage

- In FY 1997, 27,535 cubic meters were stored.
- In FY 1998, 21,188 cubic meters will be stored.
- In FY 1999, 18,774 cubic meters will be stored.

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Mixed Low-Level Waste</u> (cont'd)			
Disposal			
• In FY 1997, 660 cubic meters were disposed.			
• In FY 1998, 2,146 cubic meters will be disposed.			
• In FY 1999, 1,661 cubic meters will be disposed.			
Subtotal, Mixed Low-Level Waste	\$87,530	\$75,284	\$63,167
<u>Low-Level Waste</u>			
Perform all necessary activities to compliantly store, treat, and dispose of low-level waste generated from three Oak Ridge sites (Oak Ridge National Laboratory, the Y-12 Plant, and the East Tennessee Technical Park (ETTP)). The stored legacy low-level waste is expected to be disposed by FY 2010. The liquid low-level waste is treated as generated. [OR-38112]	\$50,784	\$49,483	\$44,494
Treatment			
• In FY 1997, 1,563 cubic meters were treated.			
• In FY 1998, 2,334 cubic meters will be treated.			
• In FY 1999, 2,084 cubic meters will be treated.			
Storage			
• In FY 1997, 31,105 cubic meters were stored.			
• In FY 1998, 37,738 cubic meters will be stored.			
• In FY 1999, 45,022 cubic meters will be stored.			

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Low-Level Waste</u> (cont'd)			
Disposal			
• In FY 1997, 253 cubic meters were disposed.			
• In FY 1998, 3,267 cubic meters will be disposed.			
• In FY 1999, 2,561 cubic meters will be disposed.			
Subtotal, Low-Level Waste	\$50,784	\$49,483	\$44,494
<u>Hazardous Waste</u>			
Effectively manage the Oak Ridge Hazardous Waste Program. The three Oak Ridge sites generate about 150 metric tons of hazardous waste annually. This waste is disposed of commercially as generated, in accordance with state regulations. There is no legacy hazardous waste. [OR-38109]	\$4,270	\$6,904	\$5,135
Treatment			
• In FY 1997, 150 metric tons were treated.			
• In FY 1998, 150 metric tons will be treated.			
• In FY 1999, 150 metric tons will be treated.			
Storage			
• In FY 1997, 0 metric tons were stored.			
• In FY 1998, 0 metric tons will be stored.			
• In FY 1999, 0 metric tons will be stored.			

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

Hazardous Waste (cont'd)

Disposal

- In FY 1997, 150 metric tons were disposed.
- In FY 1998, 150 metric tons will be disposed.
- In FY 1999, 150 metric tons will be disposed.

Subtotal, Hazardous Waste

FY 1997 **FY 1998** **FY 1999**

\$4,270

\$6,904

\$5,135

Other Waste

Effectively manage the Oak Ridge Sanitary Waste Program. The three Oak Ridge sites generate annually about 68,100 m³ of sanitary and industrial waste. This waste is disposed on-site at the Y-12 sanitary landfills, as generated, in accordance with state regulations. There is no legacy sanitary waste. The second phase of the landfill expansion project will be completed in FY 1998. From FY 1999 to FY 2070, about 4.84 million m³ of newly generated sanitary and industrial waste is expected to be disposed at a cost of \$554 million. [OR-38110]

\$6,976

\$13,374

\$10,794

Subtotal, Other Waste

\$6,976

\$13,374

\$10,794

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Spent Nuclear Fuel Stabilization</u>			
The Spent Nuclear Fuel Stabilization program provides for the safe storage, packaging, and shipment of Spent Nuclear Fuel (SNF) located at the Solid Waste Storage Area on the Oak Ridge Reservation. The SNF inventory consists of .09 metric tons heavy metal (MTHM) in aluminum-clad fuel to be shipped to the Savannah River Site by FY 1998 and .16 MTHM in stainless steel, zirconium, and graphite-clad SNF to be shipped to INEEL by FY 2003.			
[OR-63201]	\$2,379	\$2,021	\$3,553
• In FY 1997:			
- 0.003 m ³ of SNF was stabilized.			
- Obtained Nuclear Regulatory Commission approval of waiver for BMI-1 cask for shipment of aluminum-clad Spent Nuclear Fuel (SNF) to the Savannah River Site.			
- Installed eight liners in the 7827 storage facility.			
- Completed removal and transfer of all seven remaining submerged packages of SNF from 7827 storage facility.			
• In FY 1998:			
- Stabilize 0.51 m ³ (0.10 MTHM) of SNF.			
- Retrieve and repackage 15 canisters of SNF for shipment to the Idaho National Engineering and Environmental Laboratory (INEEL).			
- Install 9 liners in 7827 storage facility.			
- Complete all three shipments (11 canisters) of aluminum-clad SNF to the Savannah River Site.			

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Spent Nuclear Fuel Stabilization</u>			
<ul style="list-style-type: none"> In FY 1999: <ul style="list-style-type: none"> Stabilize 0.11 m³ (0.02 MTHM) of SNF. (Leaving 0.05 m³ or 0.01 MTHM SNF to be stabilized in FY 2000). Install ten liners in 7827 storage facility, retrieve and repackage 28 canisters of SNF for shipment to INEEL. Complete removal of SNF from 7823A. 			
Subtotal, Spent Nuclear Fuel Stabilization	\$2,379	\$2,021	\$3,553
<u>Landlord</u>			
Carry out activities at the East Tennessee Technology Park	\$10,693	\$5,944	\$5,899
<ul style="list-style-type: none"> In FY 1997: <ul style="list-style-type: none"> Completed design for K-1250-4 Bridge, K-732 switchyard reconfiguration design, K-1401 reroof design. Completed HVAC upgrades for K-1006 and K-1037. Completed ETTP records management consolidation task, Phase I. Completed construction activities for K-1650 reroof, K-1650 backup power upgrade, K-1501 precipitator asbestos, K-802 firewater pump, and K-1037 asbestos removal. Completed other construction and equipment tasks. In FY 1998: <ul style="list-style-type: none"> Complete procurement and construction activities associated with the repairs on the K-1037 roof. Complete construction activities for K-1250-4 vehicle bridge replacement, electrical distribution system critical feeder replacement, K-1206 firewater tank internal phase I refurbishment. Completion of other design and construction activities and equipment tasks. 			

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Landlord</u> (cont'd)			
<ul style="list-style-type: none"> In FY 1999: <ul style="list-style-type: none"> - Complete the storm drain structural rehabilitation survey, phase I. - Initiate and complete design, procurement and construction activities on the K-1250-3 and K-1250 vehicle bridge refurbishment. - Complete the leasing of 10 percent of available buildings at the ETTP. - Complete the K-1206 firewater tank phase II refurbishment. - Initiate and complete other construction and equipment tasks. 			
Subtotal, Landlord	\$10,693	\$5,944	\$5,899
<u>Long-Term Monitoring</u>			
Carry out activities at the Y-12 East Fork Poplar Creek [OR-42101]	\$9,119	\$0	\$0
<ul style="list-style-type: none"> In FY 1997: <ul style="list-style-type: none"> - Issued the FY 1996 S&M Report on D&D and RA Activities at the Y-12 Plant (Y/ER-276). Facility stabilizations are forecast to be completed leading to a reduction in S&M costs. 			
Carry out activities at the Off-site Remedial Actions	\$5,840	\$0	\$0
<ul style="list-style-type: none"> In FY 1997: <ul style="list-style-type: none"> - Began monitoring of the Clinch River/Poplar Creek to assess remediation effectiveness. In FY 1998 and FY 1999: <ul style="list-style-type: none"> - Long-Term Monitoring costs have been reallocated to the remedial action or decommissioning projects, which are underway. (No true long-term S&M costs are being incurred in FY 1998 or FY 1999 for this appropriation). 			
Subtotal, Long-Term Monitoring	\$14,959	\$0	\$0

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Program Support</u>			
Reservation-wide activities related to contract management support, new M&I contractor transition, and environmental information management are contained in the off-site account. [OR-48101]	\$17,027	\$14,277	\$3,960
Additional directed support provides grants to the States of Tennessee and Kentucky through Agreements In Principles, formation of site specific advisory boards and through existing Federal Facility Agreements. In FY 1999, \$555,000 is included for costs associated with security investigations for field contractor and non-Federal personnel. [OR-48301]	\$7,650	\$1,523	\$1,574
<ul style="list-style-type: none"> \$369K reprogrammed to UE D&D Fund for ETTP cleanup. 			
Subtotal, Program Support	\$24,677	\$15,800	\$5,534
TOTAL, OAK RIDGE	<u>\$245,755</u>	<u>\$222,299</u>	<u>\$182,983</u>

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

Explanation of Funding Changes From FY 1998 to FY 1999:

<u>Remedial Actions/Release Sites:</u> Decreases are due to: Completion of Upper East Fork Poplar Creek RI/FS assessments; reallocation of funds from Off-site Remedial Action to reservation-wide program support activities; and initiation of Bear Creek Valley Floodplain hotspot removal and start/completion of construction activities at BCV Tributary Interception and Diversion Trench.	- \$9,203
<u>Facility Decommissioning:</u> Decrease due to reduction in pre-decommissioning S&M activities at Y-12.	- \$1,170
<u>Spent Nuclear Fuel Stabilization:</u> The increase in Spent Nuclear Fuel (SNF) Stabilization funding is attributable to the removal of SNF from 7823A, completing the vulnerability resolution for this facility, and the retrieval and repackaging of an additional 13 canisters of SNF from 7827 in FY 1999 above that accomplished in FY 1998.	+ \$1,532
<u>Landlord:</u> No significant change.	- \$45
<u>Transuranic Waste:</u> Increases by 12 percent due to road construction and transfer of sludge to the Melton Valley Storage tanks in support of the TRU privatization contract.	+ \$1,291
<u>Mixed Low-Level Waste:</u> Reduced by 16 percent in FY 1999 since Oak Ridge will dispose of 500 fewer cubic meters and treat less mixed low-level waste.	- \$12,117
<u>Low-Level Waste:</u> Reduced by 10 percent in FY 1999 since Oak Ridge will dispose of 500 fewer cubic meters of low-level waste.	- \$4,989
<u>Hazardous Waste:</u> Reduced by 26 percent in FY 1999 since Oak Ridge will be more efficient in the processing of hazardous waste.	- \$1,769
<u>Other Waste:</u> Reduced by 19 percent in FY 1999 because the second phase of the sanitary landfill expansion project will be completed in FY 1998.	- \$2,580

POST 2006 COMPLETION - DEFENSE - OAK RIDGE (cont'd)

Explanation of Funding Changes From FY 1998 to FY 1999:

Program Support: Decreases due to reallocation/redistribution of reservation-wide program support activities between the three appropriation accounts.

-\$10,266

Total Funding Change, Oak Ridge

-\$39,316

POST 2006 COMPLETION - DEFENSE

RICHLAND

I. Mission Supporting Goals and Objectives:

MISSION

The Richland Operations Office (RL) manages the Hanford site, which is located on 560 square miles (1,450 square kilometers) in southeastern Washington. Hanford was among the first facilities constructed by the Manhattan Project for the production of plutonium for national defense. Historically, the Hanford mission was plutonium production, reactor and processing operations, and research related to advanced reactors, energy technologies, and basic sciences. All production activities ceased in 1989 leaving a legacy of significant quantities of hazardous and nuclear waste. Today the Hanford sites' mission is to safely and efficiently store, manage, treat, and cleanup the site's legacy waste and to develop and deploy science and technology.

2006 STRATEGY

The vision for carrying out this mission is that by FY 2006 EM will eliminate urgent risks, reduce the majority of the costly mortgages, be in the process of immobilizing tank wastes, and remediate high priority waste sites in the 100 Areas along the Columbia River. The *Hanford Federal Facility Agreement and Consent Order* (commonly referred to as the "Tri-Party Agreement") is the basis for the Accelerating Cleanup: Focus on 2006 path forward for this mission. The agreement, originally signed in 1989, is between the DOE, the U.S. Environmental Protection Agency, and the Washington State Department of Ecology. It is the legal document that binds the U.S. Department of Energy to actions that comply with the *Resource Conservation and Recovery Act of 1976 (RCRA)*; the *Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA)*; and the Washington State *Hazardous Waste Management Act*.

The two major elements of the vision are:

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

I. Mission Supporting Goals and Objectives:

2006 STRATEGY (cont'd)

Savings from mortgage reduction activities, coupled with enhanced operational efficiencies, will be needed to ensure the environmental management program is compliant with the Tri-Party Agreement and the regulatory requirements. The Department met with its regulators and stakeholders in July 1997 to identify and agree upon the needed efficiencies to cover any projected compliance shortfalls. The Department will strive to attain these efficiencies and will continue to work with the regulators and stakeholders to address this issue.

Mortgage reduction activities, such as accelerated deactivation, during an era of declining budgets makes it possible for the Department to increase out year cost savings and allow for more expeditious cleanup.

Tank Waste Immobilization:

- Immobilized low-activity waste storage facilities operational; immobilized high-level waste interim storage facility operational.
- Waste removal initiated on 10 single-shell tanks.
- Approximately 6 percent to 13 percent of tank waste treated by privatized contractors.
- Characterization of high-level waste in high-priority tanks complete.
- Secretarial Safety Initiatives closed and tank safety issues resolved.

High Priority Site Remediation:

- Three of nine reactors in interim safe storage.
- Thirty-one facilities decontaminated and decommissioned.
- Disposed of 2.6 million cubic yards of soil in the Environmental Restoration Disposal Facility (ERDF).
- Four-hundred and ten release sites complete (100-200-300 Areas).
- C-Reactor Safe Storage/Large Scale Demonstration:
 - Twelve technology demonstrations in characterization, demolition, decontamination, health and safety (1997).
 - Six technology demonstrations in demolition, decontamination and waste minimization (1998).

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

I. Mission Supporting Goals and Objectives:

FY 1999 PROGRAM

The FY 1999 Environmental Management Program at Hanford will make significant progress towards accomplishing the 2006 vision outlined above. Specific measures of that progress are summarized below:

Mortgage Reduction:

- Shutdown 340 Liquid Handling Facility.

Tank Waste Immobilization:

- The privatization contractor(s) will initiate detailed design, prepare equipment procurement specifications, identify and order long lead materials and equipment, and establish radiological Nuclear Safety Requirements. These FY 1999 activities will support facility construction start in FY 2000, construction completion in FY 2002, and start of tank waste treatment in FY 2003. These activities will also support TPA milestones, i.e., start hot operations of Phase I Pretreatment and Immobilization Facilities by December 2002 (M60-12), completion of Pretreatment and Immobilization of all Hanford Low Activity waste by December 2024 (M-60-00), and completion of immobilization of Hanford high-level waste by December 2008 (M51-00).
- Complete one to three evaporator campaigns to achieve tank waste volume reduction up to 1.5 million gallons.

High Priority Site Remediation:

- Efforts include surveillance and maintenance (S&M), characterization, assessment, remediation, technology demonstration, and disposition of radioactive, hazardous, and mixed waste from various sites and facilities.
- Thirty-eight release sites, out of up to 1,079 are forecast for completion; and 6 surplus facilities out of 259 are forecast for decommissioning and decontamination.
- Dispose of 620,000 tons of soil in the Environmental Restoration Disposal Facility in FY 1998 and 470,000 tons in FY 1999.

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

II. Funding Schedule:

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Remedial Action/Release Sites	\$ 53,896	\$ 61,222	\$ 81,640	\$ +20,418	+33%
Facility Decommissioning	26,081	32,916	23,562	-9,354	-28%
Facilities Deactivation	13,510	17,178	10,255	-6,923	-40%
Landlord	85,478	85,240	71,490	-13,750	-16%
Long-Term Monitoring	198	200	224	+24	+12%
High-Level Waste	269,238	271,491	273,751	+2,260	+1%
Transuranic Waste	18,389	14,894	9,055	-5,839	-39%
Mixed Low-Level Waste	40,292	34,926	38,953	+4,027	+12%
Low-Level Waste	13,069	13,739	15,323	+1,584	+12%
Hazardous Waste	4,196	7,180	7,743	+563	+8%
Other Waste	39,987	35,035	34,343	-692	-2%
Program Support	<u>90,408</u>	<u>84,075</u>	<u>86,109</u>	<u>+2,034</u>	<u>+2%</u>
 TOTAL, Richland	 <u>\$654,742</u>	 <u>\$658,096</u>	 <u>\$652,448</u>	 <u>\$-5,648</u>	 <u>-1%</u>

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

[PBS Numbers are Bracketed in the Text]

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites

Conduct Assessment and Remediation of 100 Area Release Sites [RL-ER01]

\$16,095

\$13,483

\$21,143

- In FY 1997:

- Continued excavation of release sites (442K tons of LLMW) in operable units (OU) 100-BC-1 and 100-DR-1.
- Completed remedial design for OUs 100-BC and 100-DR Remaining Liquid Release Sites.
- Issued Final Draft of 100-D Ponds RCRA Closure Plan.
- Initiated remediation engineering studies for 100 Area remaining sites.

- In FY 1998:

- Excavate 380K tons of LLMW from 100-BC-1 and 100-DR-1 OUs completing five release sites.
- Complete remedial design for 100-FR, 100-HR, and 100-KR OUs Liquid Waste Sites.
- Finalize 100-D Ponds RCRA Closure Plan.
- Complete 100 Area Remaining Sites Proposed Plan.
- Assist in issuance of the 100-NR-1&2 and 100-NR-1 TSD Records of Decision.

- In FY 1999:

- Excavate 380K tons of LLMW from 100-BC-1, 100-DR-1 and 100-HR-1 OUs completing 21 release sites.
- Complete 100 Area Burial Ground Proposed Plan.

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Conduct Assessment and Remediation of 200 Area Release Sites [RL-ER02]	\$1,671	\$1,400	\$2,333
In FY 1997:			
- Continued monitoring and testing of prototype barrier and development of 200 Area assessment and remediation strategy.			
- Evaluate Non-Dangerous Radioactive Waste Landfill impacts on groundwater.			
• In FY 1998:			
- Initiate Limited-Field Investigation Work Plans in accordance with 200 Area assessment and remediation strategy.			
- Issue 200 Area Strategy Implementation Plan.			
- Continue Barrier Testing.			
• In FY 1999:			
- Initiate assessment at Gable Mountain Pond and B-Pond Waste Groups; complete assessment at 200 North Waste Group.			
- Complete Limited-Field Investigation Work Plans for two additional 200 Area Waste Groups.			
Conduct Assessment and Remediation of 300 Area Release Sites [RL-ER03]	\$6,519	\$5,100	\$3,734
• In FY 1997:			
- Initiated Remedial Action for OU 300-FF-1 (30K tons removed).			
- Completed test pits and trenches.			
- Initiated remediation of 300 Area Process Trenches.			

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Conduct Assessment and Remediation of 300 Area Release Sites [RL-ER03] (cont'd)			
• In FY 1998:			
- Excavate 193K tons of LLMW from OU 300-FF-1 completing five release sites.			
- Complete RCRA certification closure of 300 Area Process Trenches.			
- Initiate OU 300-FF-2 Proposed Assessment Plan.			
- Complete Burial Ground 618-4 Excavation Report.			
- Complete two rounds of groundwater sampling.			
• In FY 1999:			
- Complete OU 300-FF-1 remediation with the excavation of 75K tons of LLMW from 300-FF-1 completing two release sites.			
- Complete Proposed Assessment Plan for OU 300-FF-2.			
Manage transportation of waste, operation of the Disposal Facility, design and construction of additional disposal capacity, and closure of disposal facility [RL-ER04]	\$14,841	\$22,239	\$33,830
• In FY 1997:			
- Transported and disposed of 495K tons of LLMW.			
- Developed and finalized Expansion Plan for ERDF.			
• In FY 1998:			
- Transport and dispose of 620K tons of LLMW.			
- Complete design for Cells 3 & 4 and initiate construction.			
• In FY 1999:			
- Transport and dispose of 470K tons of LLMW.			
- Complete construction of Cells 3 & 4.			
- Initiate design and construction of interim cover for Cells 1 & 2.			

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Management of the Hanford Site Groundwater including Assessment and Remediation of Groundwater Plumes will be conducted for the life cycle of the site. Its purpose is to continue to monitor the site's groundwater for contamination. [RL-ER08]	\$14,770	\$19,000	\$20,600
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Initiated consolidation and coordination of the Hanford Site Groundwater Management. - Operated the pump and treat systems for OUs 200-ZP-1, 200-UP-1, to contain the carbon tetra-chloride and uranium contaminated groundwater plumes in the 200 West Area. - Operate 100-NR-2 pump and treat system to intercept the strontium plume. - Operated the pump and treat systems for OUs 100-HR-3 and 100-KR-4 to intercept the 100 Area chromium and strontium contaminated groundwater plumes that are reaching the Columbia River using regeneratable dowe x 21K resin resulting in cost savings. - Operated the OU 200-ZP vapor extraction system to reduce the carbon tetra-chloride vadose zone plume. - Implementing treatability study using in situ redox to stabilize the chromium. If accepted for full scale, implementation would result in long-term cost reduction. • In FY 1998: <ul style="list-style-type: none"> - Continue to consolidate the Hanford Site Groundwater Management. - Complete the Columbia River Comprehensive Impact Assessment Screening Final Report - which assesses overall risk that Hanford site poses to the Columbia River. - Operate the pump and treat systems for OUs 200-ZP-1, 200-UP-1 to contain the carbon tetra-chloride and uranium contaminated groundwater plumes in the 200 West Area. 			

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Remedial Action/Release Sites (cont'd)

- In FY 1998: (cont'd)
 - Operate the pump and treat systems for OUs 100-HR-3, 100-KR-4, and 100-NR-2 to intercept the 100 Area chromium and strontium contaminated groundwater plumes that are reaching the Columbia River.
 - Operate the OU 200-ZP-2 vapor extraction system to reduce the carbon tetra-chloride vadose zone plume.
 - Complete Columbia River Shoreline Porewater Drive Point installation.
- In FY 1999:
 - Continue consolidation and coordination of the Hanford Site Groundwater Management.
 - Operate the pump and treat systems for OU 200-ZP-1 to contain the carbon tetra-chloride contaminated groundwater plume in the 200 West Area.
 - Operate the pump and treat systems for OUs 100-HR-3, 100-KR-4, and 100-NR-2 to intercept the 100 Area chromium and strontium contaminated groundwater plumes that are reaching the Columbia River.
 - Operate the OU 200-ZP-2 vapor extraction system to reduce the carbon tetra-chloride vadose zone plume.

Assessments

- In FY 1997, 2 assessments were completed.
- In FY 1998, 222 assessments will be completed.
- In FY 1999, 64 assessments will be completed.

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Action/Release Sites</u> (cont'd)			
Cleanups			
• In FY 1997, 7 cleanups were completed.			
• In FY 1998, 10 cleanups will be completed.			
• In FY 1999, 23 cleanups will be completed.			
Subtotal, Remedial Actions/Release Sites	\$53,896	\$61,222	\$81,640
<u>Facility Decommissioning</u>			
Surveillance and maintenance of surplus facilities, reactors and waste sites, and transition of deactivated facilities to surveillance and maintenance. [RL-ER05]	\$9,775	\$12,000	\$13,455
• In FY 1997:			
- Completed remote monitoring installation at REDOX and the U Plant.			
- Continued surveillance and maintenance of surplus facilities and reactors.			
- Continued stabilization and radiological surveys of waste sites and completed annual herbicide spraying.			
- Complete survey of Horns Rapids Landfill.			
• In FY 1998:			
- Continue surveillance and maintenance of surplus facilities and reactors.			
- Continue stabilization and radiological surveys of waste sites and complete annual herbicide spraying.			
- Initiate surveillance and maintenance of PUREX facilities (~50 buildings) and the 308 facility.			
- Initiate surveillance and maintenance of N-Area facilities.			

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facility Decommissioning</u> (cont'd)			
<ul style="list-style-type: none">• In FY 1999:<ul style="list-style-type: none">- Continue surveillance and maintenance of surplus facilities and reactors.- Continue stabilization and radiological surveys of waste sites and complete annual herbicide spraying.			
Decontamination and decommissioning of 259 surplus facilities and eight reactors, and the interim safe storage of reactors. [RL-ER-06]	\$12,475	\$17,616	\$4,781
<ul style="list-style-type: none">• In FY 1997:<ul style="list-style-type: none">- Completed demolition of five surplus facilities, mobilized and initiated decommissioning of 233-S Building and 108-F.- Continued Interim Safe-Storage of 105-C Reactor by integrating innovative D&D technologies through partnering with the Office of Science and Technology. Of the 20 technologies planned for demonstration by FY 1998, 11 have been demonstrated and 8 have been selected and will be used in the D&D (Interim Safe-Store) of the remaining 8 Hanford reactors.- Issued risk analysis and recommended actions for all 100 Area Riverlines.• In FY 1998:<ul style="list-style-type: none">- Complete Interim Safe-Storage of 105-C Reactor and initiate Interim Safe-Store of the 105-F and 105-DR Reactors using demonstrated innovative D&D technologicis, saving approximately \$5 million in D&D costs for each reactor over baseline estimates.- Continue D&D of 233-S and 108-F facilities.- Initiate Historical Building Mitigation Project.			

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facility Decommissioning</u> (cont'd)			
<ul style="list-style-type: none">• In FY 1998: (cont'd)<ul style="list-style-type: none">- Initiate the CERCLA decision process for the 200-Area Canyon Disposition Initiative by partnering with the Office of Science and Technology for innovative and cost effective characterization, performance assessment, engineering and science technologies.• In FY 1999:<ul style="list-style-type: none">- Continue D&D of 233-S.- Continue Historical Building Mitigation Project.- Complete 108-F.			
Landlord [TP-13]	\$3,831	\$3,300	\$5,326
<ul style="list-style-type: none">• In FY 1997:<ul style="list-style-type: none">- Completed assessments for 39 general purpose facilities, including three regulated tanker trucks and two flatbed rail cars.- Completed cleanup of three regulated flatbed railcars, ten general purpose facilities (25,600 square feet), and two water towers.• In FY 1998:<ul style="list-style-type: none">- Complete assessments for 20 general purpose facilities, primarily rail rolling stock and buildings.- Complete cleanup of three regulated rail cars.			

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facility Decommissioning</u> (cont'd)			
<ul style="list-style-type: none">• In FY 1999:<ul style="list-style-type: none">- Pre-deactivation surveillance and maintenance and facility isolation activities for the Landord program will be transferred from the Facility Deactivation category.- Complete assessments for 20 general purpose facilities, primarily rail rolling stock and buildings.- Complete cleanup of 20 general purpose facilities.- Perform surveillance, maintenance or shutdown of more than 60 vacant general purpose facilities.			
Assessments			
<ul style="list-style-type: none">• In FY 1997, 39 assessments completed.• In FY 1998, 20 assessments will be completed.• In FY 1999, 21 assessments will be completed.			
Cleanups			
<ul style="list-style-type: none">• In FY 1997, 77 facilities cleaned up.• In FY 1998, 23 facilities will be cleaned up.• In FY 1999, 40 facilities will be cleaned up.			
Subtotal, Facility Decommissioning	<u>\$26,081</u>	<u>\$32,916</u>	<u>\$23,562</u>

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facilities Deactivation</u> [RL-TP13, 02]			
Includes activities related to the deactivation of landlord surplus facilities. This work is generally associated with the concept of mortgage reduction, which basically reduces the high annual surveillance and maintenance costs associated with these facilities. Additional benefit is gained through deactivation by the reduction of risks and reduced exposure to hazards inherent in aging, deteriorating facilities. [TP-13]	\$900	\$1,326	\$0
Also includes activities associated with maintaining the minimum level of surveillance and maintenance for facility safety at the Waste Encapsulation and Storage Facility (WESF) where approximately 2000 cesium and strontium capsules (150 million curies) are held in water-filled pools. The WESF is currently expected to provide safe storage for these capsules for another 20 years, at which time they will likely be transferred to TWRS for disposition. Surveillance and maintenance activities are generally driven by maintaining the safety basis as required by the Facility Safety Activity Report, compliance activities, contaminated facility radiation protection, configuration management, sampling/monitoring, emergency response, security, material control and accountability, training and certification, conduct of operations, and facility maintenance. [TP-02]	\$12,610	\$15,852	\$10,255
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Provided surveillance and maintenance activities for the Waste Encapsulation and Storage Facility (WESF). - Completed deactivation of 37 vacant buildings (104,000 square feet) and abandoned septic sewer systems. - Performed surveillance or maintenance of vacant general purpose facilities. • In FY 1998 <ul style="list-style-type: none"> - Continue those surveillance and maintenance activities described for FY 1997. - Complete deactivation of three steam plants. - Perform surveillance, maintenance or isolation of 60 vacant general purpose facilities. 			

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Facilities Deactivation</u> (cont'd)			
<ul style="list-style-type: none"> • In FY 1999: <ul style="list-style-type: none"> - Continue those surveillance and maintenance activities described for FY 1997. - Pre-deactivation surveillance and maintenance and facility isolation activities for the Landord program will be transferred from the Facility Deactivation category to Facility Decommissioning. 			
Subtotal, Facility Deactivation	<u>\$13,510</u>	<u>\$17,178</u>	<u>\$10,255</u>
<u>Landlord</u> [RL-HM01, RL-OT01, RL-TP13, RL-WM-06, RL-OT-04]			
<p>The goal of the Landlord Program is to ensure the general purpose infrastructure and site services are always ready to safely, reliably, and efficiently support environmental management activities in a cost effective manner. The program also has a goal to reduce long-term surveillance and maintenance costs for vacant general purpose facilities and regulated legacy equipment. The program's end-state objective is implementing the minimum set of landlord services necessary to support long-term missions. Surplus facilities or equipment will be either recycled for alternative uses by DOE, transferred for reuse by another government agency, excessed to the General Services Administration (GSA), transferred to Environmental Restoration for remediation, or demolished. Once established, the end-state will minimize DOE overhead costs and, in some cases, avoid unnecessary capital costs.</p>			
	\$55,756	\$54,790	\$45,360

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Landlord (cont'd)

- In FY 1997:
 - Completed more than twenty capital and operating expense infrastructure projects, including: electrical distribution, fire protection, communications, sanitary waste, transportation, and general purpose buildings.
 - Continue to provide support for intergovernmental and stakeholder activities, including the declassification of 2,144 documents, health information, payments-in-lieu-of-taxes, and downwinder litigation.
 - Completed construction of the Hazardous Materials Management and Emergency Response Training and Education Center. Trained 1,185 students, including 25 Hungarian and Slovakian border guards, in Technology Development and deployment of technologies for detecting hazardous, nuclear, chemical, and biological agents.
- In FY 1998:
 - Complete more than sixteen capital and operating expense infrastructure projects, including: water, communications, transportation, emergency systems, sanitary wastes.
 - Provide environmental protection, public safety and site systems engineering at the site level.
 - Continue to provide support for intergovernmental and stakeholder activities, completing the Hanford Health Information Network project, and reviewing 240,000 pages for declassification.
 - Begin hands-on training at the Hazardous Materials Management and Emergency Response Training and Education Center, and continue Technology Development and deployment training, and new geophysical technologies.

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Landlord</u> (cont'd)			
<ul style="list-style-type: none"> In FY 1999: <ul style="list-style-type: none"> Complete capital and operating expense infrastructure projects, including: water, transportation, emergency systems, and sanitary wastes. Continue to provide environmental protection, public safety and site systems engineering at the site level. Continue to provide support for intergovernmental and stakeholder activities, reviewing 240,000 pages for declassification. Continue hands-on training at the Hazardous Materials Management and Emergency Response Training and Education Center, and continue to expand Technology Development training. 			
<u>Landlord (Analytical Services)</u>			
Provide consolidated laboratory services to Hanford program in support of its mission.	\$29,722	\$30,450	\$26,130
<ul style="list-style-type: none"> In FY 1997, FY 1998, and FY 1999: <ul style="list-style-type: none"> Provide base funding for on-site labs. 			
Subtotal, Landlord	\$85,478	\$85,240	\$71,490
<u>Long-Term Monitoring</u> [ER07]	\$198	\$200	\$224
Continued long-term surveillance and maintenance of 1100 Area and Arid Lands Ecology region in all three years.			
Subtotal, Long-Term Monitoring	\$198	\$200	\$224

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

High-Level Waste [RL-TW01, 02, 03, 04, 05, 08 and 09]

Waste activities at Hanford include maintenance and disposition of the high-level waste (HLW) tanks, solid and liquid waste management, analytical services, near-field environmental monitoring, and Pacific Northwest National Laboratory waste management and oversight.

The highest priority waste activity at Hanford is the safe storage and disposition of the HLW contained in underground storage tanks, under the Tank Waste Remediation System (TWRS) project. Over the past few years, the site has been working on the continued safe storage and characterization of the wastes, as well as preparing for retrieval of the waste and providing the infrastructure for immobilization prior to its disposal. The 177 HLW tanks hold about 203,000 cubic meters of HLW, which represents approximately 200 million curies of radioactivity. Release of these materials could present significant hazards to workers, the general public, or the environment. Safety concerns and system improvements are being addressed to reduce potential health, safety, and environmental risks. In FY 1998 and FY 1999, RL expects to close all safety concerns that were identified in 1993 as Secretarial Safety Initiatives. Completion of characterization of high-priority tanks will enable closure of the DNFSB Recommendation 93-5 by December 2002. The TWRS project is currently preparing for the retrieval, pretreatment, and immobilization of the tank wastes. The treatment and immobilization of the wastes is being privatized, and is requested under the Defense Environmental Management Privatization budget. Support for the privatization of treatment and disposal of HLW includes the deployment of retrieval systems in the tanks, characterization of the feed, upgrades to tank farm systems, and establishment of a regulatory oversight function.

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

High-Level Waste [RL-TW01, 02, 03, 04, 05, 08 and 09] (cont'd)

FY 1997

FY 1998

FY 1999

The TWRS has redefined its program strategy to focus on tank waste disposal (i.e., to provide feed delivery to the private contractors beginning in FY 2002 by accelerating critical path projects). These HLW disposal activities are required in FY 1998 and FY 1999 to support compliance requirements beyond FY 2000.

Safety (i.e. minimal "must do" operational requirements) and mortgage reduction will remain the highest priorities (followed by emphasis on tank waste disposal), compliance activities not directly related to tank waste disposal will be done at reduced costs.

Examples of efficiencies and cost reductions:

- the tank waste organic complexants safety issue will be resolved early and without significant waste characterization expenses (this will yield immediate and out-year cost savings and EM believes it has a high probability of success);
- costs associate with saltwell pumping will be reduced substantially from current estimates (high probability of success);
- the flammable gas safety issue will be resolved early (this will yield immediate and out-year cost savings but has a low probability of success); and
- minimum safe activities in tank farm operations will be more efficient than at present (this will yield immediate and out-year cost savings, but has a lower probability of success).

\$269,238

\$271,491

\$273,751

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

High-Level Waste [RL-TW01, 02, 03, 04, 05, 08 and 09] (cont'd)

- In FY 1997:
 - Completed Tank Farms Ventilation Upgrades project (89-D-173).
 - Completed Cross Site Transfer System (93-D-183).
 - Completed interim stabilization of 2 single-shell tanks (bringing the total to 118 of 149 SST's).
 - Issued 19 tank characterization reports.
 - Installed gas monitoring equipment on potential flammable gas tanks.
 - Installed lightning protection and continuous temperature monitoring on organics tanks.
 - Awarded Phase I privatization contract with funds carried over from prior years.
 - Completed design criteria for the low-level waste and high-level waste feed delivery systems for privatization.
 - Completed conceptual design and acquisition strategy for the Privatization Infrastructure Project (Project No. 99-D-403), which supports the TWRS Tank Waste Treatment Privatization project.
- In FY 1998:
 - Meet tank characterization commitments based on the new Waste Information Requirements Document.
 - Interim stabilization of 3 single-shell tanks (122 of 149 SST's).
 - Achieve substantial cost reductions in the saltwell pumping project.
 - Achieve early resolution of the organic complexants issue.
 - Initiate installation of sluicing and mixing systems in ten double-shell tanks.
 - Update privatization feed staging plans based on state-of-the-art data.
 - Evaluate privatization vendors' conceptual designs and make a decision after Congressional review regarding whether to proceed with tank waste disposal privatization.

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

High-Level Waste [RL-TW01, 02, 03, 04, 05, 08 and 09] (cont'd)

- In FY 1999:
 - Meet tank characterization commitments based on the new Waste Information Requirements Document.
 - Continue installation and operation of sluicing and mixing systems ten double-shell tanks.
 - Sample and analyze privatization Phase I waste feed.
 - Conduct process testing on actual tank waste for privatization.
 - Definitive design, construction, and some startup of privatization infrastructure facilities.
 - Begin identifying privatization Phase II requirements.

Treatment

- In FY 1997, 0 cubic meters of HLW was treated.
- In FY 1998, 0 cubic meters of HLW will be treated.
- In FY 1999, 0 cubic meters of HLW will be treated.

Storage

- In FY 1997, 203,213 cubic meters of high-level waste was in storage.
- In FY 1998, approximately 220,900 cubic meters of high-level waste will be in storage.
- In FY 1999, approximately 220,900 cubic meters of high-level waste will be in storage.

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>High-Level Waste</u> [RL-TW01, 02, 03, 04, 05, 08 and 09] (cont'd)			
Disposal			
• In FY 1997, no high-level waste will be disposed by FY 1999.			
• In FY 1998, no high-level waste will be disposed by FY 1999.			
• In FY 1999, no high-level waste will be disposed by FY 1999.			
Subtotal, High-Level Waste	\$269,238	\$271,491	\$273,751

Hanford Solid and Liquid Waste Management Program

The Hanford Solid and Liquid Waste Management Program provides for the following essential services through FY 1999 in these areas:

Current and future solid waste and liquid effluent streams, including radioactive (except HLW), mixed, hazardous, and other wastes, are managed in a safe, responsible, cost effective, and legally compliant manner. Large volumes of solid waste are received and disposed, or stored awaiting treatment prior to disposal. Minimal treatment of mixed wastes necessary to stay within storage capacity will be performed through FY 1999. Liquid waste streams are received at four treatment and/or disposal facilities on the Hanford site, and disposed to the soil columns and the river in a compliant manner. The liquid effluent project (95-D-408) also operates the 242-A Evaporator in support of the TWRS project.

Analytical services are provided at two Hanford facilities (222-S for high-activity samples, and WSCF for low-level samples), supplemented by commercial laboratories. Of significance is the analytical support to the TWRS, spent nuclear fuel program, solid wastes, liquid effluent, and environmental restoration activities.

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

Solid and Liquid Waste Management (cont'd)

FY 1997

FY 1998

FY 1999

Decontamination services through FY 1999 will be limited to the 2706-T facility; the 221-T (T Plant) facility will be placed in cold standby, thereby precluding large-scale decontamination services.

Transuranic Waste [WM03, 04, and ST01]

The current inventory of TRU in storage at Hanford is about 16,320 cubic meters. All of this waste is to be disposed and requires some form of treatment. In addition, about 25,668 cubic meters of TRU is forecast for the site life cycle.

\$18,389

\$14,894

\$9,055

- In FY 1997:
 - Completed WRAP I construction and start-up activities.
 - Compliantly stored existing waste inventory and of new waste receipts.
 - Performed verification of received waste to meet Washington Department of Ecology compliance requirements.
- In FY 1998:
 - Preparation for TRU waste treatment (no funding for treatment or WIPP certification activities).
 - Compliantly store existing waste inventory and new waste receipts.
 - Performed verification of received waste to meet Washington Department of Ecology compliance requirements.
- In FY 1999:
 - Minimal treatment of TRU waste, WIPP certification activities are not funded.
 - Continue compliant storage of existing waste inventory and of new waste receipts.
 - Continue verification of received waste to meet Washington Department of Ecology compliance requirements.

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Transuranic Waste</u> [RL-WM03, 04, and RL-ST01] (cont'd)			
Treatment			
• In FY 1997, 0 cubic meters of TRU waste was treated.			
• In FY 1998, 0 cubic meters of TRU waste will be treated.			
• In FY 1999, 648 cubic meters of TRU waste will be treated.			
Storage			
• In FY 1997, 16,320 cubic meters was stored.			
• In FY 1998, 16,599 cubic meters will be stored.			
• In FY 1999, 16,705 cubic meters will be stored.			
Disposal			
• In FY 1997, 0 cubic meters was disposed.			
• In FY 1998, 0 cubic meters will be disposed.			
• In FY 1999, 0 cubic meters will be disposed.			
Subtotal, Transuranic Waste	<u>\$18,389</u>	<u>\$14,894</u>	<u>\$9,055</u>

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Mixed Low-Level Waste</u> [RL-WM03, 04, and RL-ST01]			
Provide an effective and efficient system that stores, treats, and disposes of Hanford MLLW, as well as provide site-wide decontamination services. The budget for the decontamination services is captured under the MLLW category, but the services support <u>ALL</u> waste types. The current inventory of MLLW in storage at Hanford is about 8,586 cubic meters. All of this waste is to be disposed and requires some form of treatment. In addition, about 300,300 cubic meters of MLLW is forecast for the site life cycle.	\$40,292	\$34,926	\$38,953
• In FY 1997:			
- Compliantly stored existing waste inventory and of new waste receipts.			
- Performed small quantity MLLW treatment; non-thermal treatment contract awarded.			
- Performed verification of received waste to meet Washington Department of Ecology compliance requirements.			
• In FY 1998:			
- Small quantity MLLW treatment will be performed at INEEL, through the non-thermal treatment contract.			
- Prepare for disposal of mixed waste in on-site Subtitle C trenches.			
- Continue compliant storage of existing waste inventory and of new waste receipts.			
- Continue verification of received waste to meet Washington Department of Ecology compliance requirements.			
• In FY 1999:			
- Will continue MLLW treatment via the non-thermal treatment contract.			
- Continue compliant storage of existing waste inventory and of new waste receipts.			
- Continue verification of received waste to meet Washington Department of Ecology compliance requirements.			

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Mixed Low-Level Waste</u> [RL-WM03, 04, and RL-ST01] (cont'd)			
Treatment			
• In FY 1997, 573 cubic meters of MLLW was treated.			
• In FY 1998, 109 cubic meters of MLLW will be treated.			
• In FY 1999, 560 cubic meters of MLLW will be treated.			
Storage			
• In FY 1997, 8,586 cubic meters of MLLW was stored.			
• In FY 1998, 8,855 cubic meters of MLLW will be stored.			
• In FY 1999, 10,302 cubic meters of MLLW will be stored.			
Disposal			
• In FY 1997, 0 cubic meters of MLLW was disposed.			
• In FY 1998, 0 cubic meters of MLLW will be disposed.			
• In FY 1999, 0 cubic meters of MLLW will be disposed.			
Subtotal, Mixed Low-Level Waste	\$40,292	\$34,926	\$38,953

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Low-Level Waste</u> [RL-ST01 and RL-WM03]			
Provide an effective and efficient system that stores, treats, and disposes of Hanford solid LLW. The LLW Disposal of about 16,582 cubic meters of LLW is forecast over 3 years. The average annual disposal rate for LLW at Hanford is about 5,500 cubic meters.	\$13,069	\$13,739	\$15,323
• In FY 1997:			
- Disposed receipts of LLW.			
- Verified received waste to meet waste acceptance criteria compliance requirements.			
- Compliantly stored existing waste inventory.			
• In FY 1998:			
- Continue disposal of planned receipts of LLW.			
- Continue verification of received waste to meet waste acceptance criteria compliance requirements.			
- Continue compliant storage of existing waste inventory.			
• In FY 1999:			
- Continue disposal of planned receipts of LLW.			
- Continue verification of received waste to meet waste acceptance criteria compliance requirements.			
- Continue compliant storage of existing waste inventory.			

Treatment

- In FY 1997, 0 cubic meters of LLW was treated.
- In FY 1998, 26 cubic meters of LLW will be treated.
- In FY 1999, 30 cubic meters of LLW will be treated.

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Low-Level Waste</u> [RL-ST01 and RL-WM03] (cont'd)			
Storage			
• In FY 1997, 180 cubic meters of LLW was stored.			
• In FY 1998, 180 cubic meters of LLW will be stored.			
• In FY 1999, 180 cubic meters of LLW will be stored.			
Disposal			
• In FY 1997, 6,295 cubic meters of LLW was disposed. It includes about 1,900 cubic meters from off-site generators.			
• In FY 1998, 5,720 cubic meters of LLW will be disposed. It includes about 2,200 cubic meters from off-site generators.			
• In FY 1999, 12,379 cubic meters of LLW will be disposed. It includes about 8,000 cubic meters from off-site generators.			
Subtotal, Low-Level Waste	<u>\$13,069</u>	<u>\$13,739</u>	<u>\$15,323</u>
<u>Hazardous Waste</u> [ST01]			
Provide an effective and efficient system that disposes of Hanford hazardous wastes.	\$4,196	\$7,180	\$7,743
• FY 1997, FY 1998, and FY 1999:			
- All newly generated Hanford hazardous waste is disposed through a commercial contract. No storage activities are performed. Hazardous waste is transported to the commercial facility directly from the on-site generator facility.			

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Hazardous Waste</u> [ST01] (cont'd)			
Disposal			
• In FY 1997, 274 cubic meters was disposal ready.			
• In FY 1998, 83 cubic meters will be disposal ready.			
• In FY 1999, 82 cubic meters will be disposal ready.			
Subtotal, Hazardous Waste	\$4,196	\$7,180	\$7,743
<u>Other Waste</u> [RL-WM05 and RL-ST01]			
Provide an effective and efficient system that stores, treats and disposes of Hanford Liquid effluent.			
	\$39,987	\$35,035	\$34,343
• FY 1997			
- Disposed of planned (and unplanned) liquid receipts.			
- Verified of received effluents to meet Washington Department of Ecology compliance requirements.			
- Treated and disposed of over 382 thousand cubic meters of liquid effluents from additional sources including contaminated water from N-Basin and K-Basins, contaminated groundwater, leachates from disposal facilities, cooling water, research lab process waste, and steam condensate from various facilities.			
- Completed Effluent Treatment Facility (ETF) startup.			
• In FY 1998:			
- Continue disposal of planned (and unplanned) liquid receipts.			
- Continue verification of received effluents to meet Washington Department of Ecology compliance requirements.			
- Continue to complete one evaporator campaign to achieve tank waste volume reduction of 1.6 million gallons.			

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Other Waste</u> (cont'd)			
<ul style="list-style-type: none"> • In FY 1999: <ul style="list-style-type: none"> - Continue disposal of planned (and unplanned) liquid receipts. - Continue verification of received effluents to meet Washington Department of Ecology compliance requirements. - Continue to complete one to three evaporator campaigns to achieve tank waste volume reduction up to 1.5 million gallons. 			
Subtotal, Other Waste	\$39,987	\$35,035	\$34,343

Program Support [RL-0T01, RG01, ST01, TW10, ER10]

Provide program management for Richland Environment management activities, including Compliance, Quality, Safety and Health; Project Technical Support including Technology Application, Environmental Sciences, Sample and Data Management, Design Support, Regulatory Support; Project and Program Support including Procurement, External Affairs, Records and Document Control; and Planning and Controls including Budget Planning, Baseline Management, Project Control Systems, Performance Measures and the TWRS Regulatory Unit.

\$90,408	\$84,075	\$86,109
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In FY 1999, The Department will divide responsibility for obtaining and maintaining contractor security clearances. The Office of Security Affairs, which has been responsible for funding all contractor and Federal security clearances in previous years, will budget only for Federal employees at Headquarters and the field, in addition to Headquarters contractor clearances. This change in policy will enable program managers to make decisions as to how many and what level of clearances are necessary for effective program management. In FY 1999, \$826,000 is included in the Richland Operations budget for contractor security clearances.

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Program Support</u> (cont'd)			
• In FY 1997:			
- Supported site-wide deactivation planning through facility assessments of candidate deactivation projects and development of end-point criteria, S&M plans, regulatory documentation, facility deactivation designs, and facility turnover packages, and developed and maintained an executable technical, schedule, and cost baseline.			
• In FY 1998:			
- Continue those activities described for FY 1997. In addition, will provide funding for accelerating deactivation planning and management activities associated with the transition of contaminated surplus facilities.			
• In FY 1999:			
- Will continue those activities described for FY 1998.			
- Increase in effort for mission support and TWRS Management Support.			
Subtotal, Program Support	<u>\$90,408</u>	<u>\$84,075</u>	<u>\$86,109</u>
TOTAL, RICHLAND	<u>\$654,742</u>	<u>\$658,096</u>	<u>\$652,448</u>

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

Explanation of Funding Changes from FY 1998 and FY 1999:

<u>Remedial Activities/Release Sites:</u> 100 Area RA - The remediation activities in FY 1998 are primarily the excavation of soil. Beginning in FY 1999, the buried effluent piping will be remediated. The increase is because the unit cost per ton to remediate buried pipelines is 2 to 3 times more expensive than soil.	+\$7,660
200 Area RA - Initiation of assessment at Gable Mountain Pond and B-Pond waste groups.	+\$933
300 Area RA - Majority of 300-FF-1 OU remedial actions are completed by mid-year FY 1999.	-\$1,366
ERDF - Construction of ERDF disposal cells 3&4 and initiation of design and construction of interim cover.	+\$11,591
Groundwater Management - Restart of well decommissioning activities terminated in FY 1998.	+\$1,600
<u>Facility Decommissioning:</u> S&M - Increased risk assessment activities in 100 K Area.	+\$1,455
D&D - Decrease is due to completion of C Reactor interim safe storage (ISS) in FY 1998; delay of 108-F Facility.	-\$12,835
Transfer of Landlord D&D activities from Facility Deactivation to Facility Decommissioning Subcategory.	+\$2,026
<u>Facilities Deactivation:</u> Decrease is due to completion of Waste Encapsulation and Storage Facility (WESF) ion exchange system and low-level liquid waste system as well as accounting adjustment to transfer D&D Landlord activities from Facility Deactivation to Facility Decommissioning category.	-\$6,923

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

Explanation of Funding Changes from FY 1998 and FY 1999: (cont'd)

Landlord: Decrease reflects completion of 219-S Secondary Containment, a line item project under Analytical Services, in FY 1998. - \$2,500

Decrease reflects top priority GPP projects (Fire Station Consolidation, Phase 2 and 600 Area Sanitary System) proposed for FY 1999 cost less than the proposed projects for FY 1998 (Stack Monitoring System, Hanford 200 East Area Water Plant Effluent Steam Reduction and 200 West Area Regional Drain Field) under the Landlord Site Infrastructure Program. - \$7,427

Decrease reflects closure of Hanford Health Information Network grant to Pacific Northwest states and tribes. Contract close-out costs for Hanford's previous site operator, the Westinghouse Hanford Company, are projected to be lower in FY 1999, as are the other mission support activities. - \$3,823

Long-Term Monitoring: No significant change. + \$24

High-Level Waste (HLW): Increased funding is due to capital construction/procurement activities needed to support the private vendor HLW Treatment facilities. Activities include: construction of Privatization Phase I Infrastructure line-item (99-D-403) (+\$14,800,000); moving ahead on the In Tank Retrieval system (+\$736,000); accelerated schedule on the Tank Farm Restoration and Site Operations project (+\$8,762,000). Offsetting decreases reflect resolution of the Tank Safety Issue (-\$7,394,000) and reduced characterization requirements (-\$10,246,000) and cost performing expense activities due to decreased rates by PHMC (-\$4,398,000). + \$2,260

Transuranic Waste: Decrease funding is due to discontinuing the use of 224-T Facility (TRUSAF) for storage and verification functions for TRU waste as its stored waste is centralized at Hanford. Discontinue the plan of using the TRU processing line in WRAP. - \$5,839

Mixed Low-Level Waste (MLLW) : The funding increase is due to planned quadrupling of the Mixed Low-Level waste volume for treatment. + \$4,027

POST 2006 COMPLETION - DEFENSE - RICHLAND (cont'd)

Explanation of Funding Changes from FY 1998 and FY 1999: (cont'd)

Low-Level Waste: Slight increase is due to projected increase in volumes treated and disposed. +\$1,584

Hazardous Waste: No significant change. +\$563

Other Waste: Decrease due to lower volume of liquid wastes expected for evaporator campaigns. -\$692

Program Support: Increase in Hanford-site-wide mission support and TWRS Management support as integration with privatized contractors becomes more critical. +\$2,034

Total Funding Changes, Richland **-\$5,648**

POST 2006 COMPLETION - DEFENSE

SAVANNAH RIVER

I. Mission Supporting Goals and Objectives:

MISSION

The Savannah River Cleanup Program (SRCP) has as its mission the elimination of the legacy that resulted from the production of nuclear materials during the Cold War. This legacy includes contaminated facilities and land areas, many of which still contain nuclear materials and wastes. The Savannah River Site (SRS), located near Aiken, South Carolina, covers over 300 square miles and includes five nuclear reactors, two chemical separations facilities, fuel and target fabrication facilities, tritium processing facilities, a heavy water facility, two high-level waste tank farms, low-level waste storage and disposal facilities, a high-level waste treatment facility (DWPF), the Savannah River Technology Center (SRTC), and numerous administrative and technical support facilities. Additionally, these facilities have varying degrees of environmental contamination (soil and groundwater); the majority of which will require some remedial action to address environmental and health risks. In a broad sense, dealing with these problems is considered “cleanup” of the Cold War legacy.

The Savannah River Cleanup Program is composed of the following major elements: Spent Nuclear Fuel Stabilization, Nuclear Materials Stabilization, Waste Management (High-Level, Transuranic, Hazardous, Mixed Low-Level, and Other), Deactivation and Remediation, and Landlord. This account funds all activities whose life cycle will be completed after FY 2006.

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

I. Mission Supporting Goals and Objectives:

2006 STRATEGY

The 2006 strategy is to stabilize the spent nuclear fuel, nuclear materials, and all types of wastes using currently available (or near-term) technology and facilities. Eventually, the nuclear materials would be dispositioned (using a technology to be determined) and the remaining spent nuclear fuel and wastes would be sent to geologic repositories. To the extent possible, (to be determined through technical analyses, National Environmental Policy Act (NEPA), and the regulatory process), SR may be able to assist other sites in elimination of their Cold War “legacies”. Savannah River will stabilize all spent nuclear fuel requiring stabilization and all nuclear materials (currently scheduled to be received or already at SRS) by FY 2006. Two-thousand and eighty canisters of high-level waste, representing 37 percent of inventoried waste, will be vitrified, and 14 high-level waste tanks will be closed. Most major inactive facilities will be deactivated by FY 2006. Most high risk release sites will be remediated by FY 2006.

It is expected that, due to the variety and amounts of nuclear materials and wastes on-site, the extent of facility and land contamination, and its potential to help solve cleanup issues at other “legacy” sites in the DOE complex, SRS will have a “long-term” cleanup mission. Therefore, after 2006, the focus will be on receiving the remaining foreign research reactor fuel through 2035; managing the high-level, transuranic, hazardous, mixed low-level, and other wastes through about 2035; deactivating facilities as missions are completed and the facilities become excess; and remediating the revising low risk sites.

FY 1999 PROGRAM

In FY 1999, 67 casks of spent nuclear fuel will be received from foreign and domestic sources. In FY 1999, the In-Tank Precipitation Facility will resume operations and the Salt Process Cell (SPC) at the Defense Waste Processing Facility (DWPF) will startup. Up to 200 canisters of high-level waste (HLW) will be stabilized at DWPF and 4,042 cubic meters of high-level waste will be treated. The Consolidated Incinerator Facility (CIF) will continue to operate and will treat mixed low-level waste, low-level waste, and hazardous waste. Approximately 4,000 cubic meters of low-level waste and 70,000 cubic meters of other waste will be treated and disposed. Although no additional facilities will be deactivated, 26 release sites (about 6 percent of the release sites) will be remediated.

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

I. Mission Supporting Goals and Objectives:

FY 1999 PROGRAM (cont'd)

In FY 1999, the Department will divide responsibility for obtaining and maintaining contractor security clearances. The Office of Security Affairs, Energy Water and Development Appropriation, Other Defense Activities, which has been responsible for funding all contractor and Federal security clearances in previous years, will budget only for Federal employees at Headquarters and the field, in addition to Headquarters contractor clearances. Therefore, field/operations offices are responsible for funding their contractor workforce clearances. This change in policy will enable program managers to make decisions as to how many and what level of clearances are necessary for effective program management.

The budget reflects transfer of scope from the Defense Programs to the Environmental Management program for the management of nuclear materials that are excess to National security requirements. This completes the transfer of ownership of these materials, which EM shall be responsible for planning, funding, and managing all activities required for the safe and secure storage of excess National security materials removed from the site and disposed.

COMPLIANCE DRIVERS

Savannah River will be in compliance with all regulatory commitments for FY 1999. This includes the environmental restoration activities and the High-Level Waste program commitments cited in the Federal Facility Agreement (FFA) and Resource Conservation and Recovery Act (RCRA) permit, and the waste management activities commitments in the Site Treatment Plan Consent Order. In some instances, options are being considered which may have short- and long-term advantages over the baseline planning assumptions in current commitment documents. SRS will continue its ongoing dialogue with appropriate regulatory agencies to optimize solutions to environmental problems and resolve other program issues consistent with the established regulatory process defined in the agreements. SRS has also made a number of other commitments in implementation plans responding to recommendations made by the Defense Nuclear Facilities Safety Board (DNFSB). While not subject to formal enforceable action, these commitments are treated with the same high priority as legal obligations.

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

I. Mission Supporting Goals and Objectives:

MAJOR PROGRAM ELEMENTS

The goal of the Spent Nuclear Fuel (SNF) program is to support the U.S. nonproliferation policy through implementing the Foreign Research Reactor (FRR) Spent Fuel Acceptance program and to manage the SNF currently at the site (foreign and domestic research reactor SNF, as well as SRS production reactor SNF) by stabilizing the fuel or preparing it for long-term disposition in a Federal repository. Some of the SNF currently on-site (aluminum based or declad SNF in a degraded condition) is considered to be “at-risk” and is scheduled to be shipped to the canyon facilities for stabilization (see below). Potentially difficult to dispose of SNF is currently being evaluated for stabilization in the canyons for preparation for eventual disposition. Savannah River plans to prepare other intact fuel for ultimate disposal in a geologic repository through a program in which the intact fuel is treated by one of two alternative candidate technologies (direct co-disposal or dilution by melting followed by co-disposal). To support this approach, SRS initiated a project in FY 1998 to obtain, through privatization, transfer and storage services to receive, treat, and/or package SNF in canisters and safely dry-store this SNF in a “road-ready” form until a geologic repository is available. This would permit an accelerated closure of the reactor basins and the Receiving Basin for Off-site Fuel (RBOF) which are being used for wet storage on an interim basis.

The SRS waste management activities encompasses all types of waste generated and stored at SRS. The HLW program integrates management of existing and new facilities to stabilize HLW for final disposal and to empty storage tanks so they can be removed from service. Included are operation of HLW evaporators to provide more available space in the tank farms (to handle waste generated by the stabilization of nuclear materials), operation of DWPF, operation of the In-Tank Precipitation (ITP) facility to provide feed for DWPF, and operation of Extended Sludge Processing (ESP) to provide feed for DWPF. Replacement HLW Evaporator will startup and operate in order to provide a reliable evaporation capability, to avoid the need for new tanks, and to allow the retirement of older evaporator systems. Savannah River has about 127,985 cubic meters of HLW in the form of liquid, sludge and salt cake. This volume represents about 534 million curies of radioactivity. The 31 million gallons of HLW are stored in 43 active tanks in two “tank farms”. Six tanks are dedicated to ITP and ESP and two tanks have been emptied and closed.

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

I. Mission Supporting Goals and Objectives:

MAJOR PROGRAM ELEMENTS (cont'd)

Savannah River also manages varying amounts of all other waste types. Progress is being made towards mission completion for all waste types. Approximately 380 cubic meters of mixed low-level waste will be treated by a private vendor by FY 1999. The Consolidated Incineration Facility (CIF) is operating and is expected to treat SR's current inventory of mixed waste, as well as future mixed waste expected to be generated by the operations of DWPF. In FY 1999, approximately 2.7 million pounds of low-level waste will be volume reduced and disposed. Shipments of transuranic (TRU) waste to WIPP should begin by late FY 1999. Hazardous waste will be treated and disposed through off-site commercial contracts and sanitary waste will be disposed at a regional facility.

Deactivation begins once the bulk nuclear materials are stabilized/removed from a facility and consists of activities such as removal of hazardous chemicals, flushing and cleanout of systems and equipment, etc., to the point that little contamination or safety risk to workers, the public, and the environment exists. As this is achieved, the attributes of an operating nuclear facility described above (security, radiation protection, material control and accountability, etc.) can be eliminated or substantially curtailed resulting in major reductions in surveillance and maintenance costs. Although additional deactivation would result in significant savings, extensive deactivation of the reactors (C, P and R-Areas), and fuel fabrication facilities (M-Area) has resulted in major reductions in the annual surveillance and maintenance costs for these facilities. Deactivation is yet to be substantially undertaken in K- and L-Reactor Areas, Separations (F and H Areas), and the waste management facilities in S-Area since these facilities still contain substantial quantities of nuclear materials or wastes.

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

I. Mission Supporting Goals and Objectives:

MAJOR PROGRAM ELEMENTS (cont'd)

The environmental restoration (ER) activities encompasses all aspects of assessment and remediation of facilities and release sites (including associated groundwater) that are no longer a part of active operations at SRS and currently includes 477 release sites and one facility. These release sites are grouped into six watershed areas: Flood Plain Swamp, Four Mile Branch, Lower Three Runs, Pen Branch, Steel Creek, and Upper Three Runs. Primary on-site contaminants include various nuclides (including plutonium, tritium, and uranium), volatile organic compounds, heavy metals, and solvents. Legal drivers for activities conducted at SRS include Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the site Federal Facilities Agreement (FFA) (August 1993), several settlement agreements, and a consent decree. Through FY 1997, 165 release sites will be completed and in FY 1998 an additional 28 release sites are forecast to be completed. In FY 1999, 26 release sites are forecast for completion.

The FY 2006 Plan goal for ER remediation activities is to complete remediation projects for most high risk release sites. The estimated life cycle cost for completion of all remediation projects is \$2,700,000,000. Included in this cost is \$1,300,000,000 for work after FY 2006. This includes post closure activities such as surveillance and maintenance, groundwater remediation operations, and cleanup of the tank farm release sites. In FY 1999, budget assumptions include a 12 percent enhanced performance efficiency goal.

The Landlord program is directed toward the management of general purpose infrastructure and site-wide program support that are essential for owning, operating, and accomplishing essential missions at SRS. Specific examples of infrastructure and support systems include: grounds, roads, general purpose buildings, utilities, communications, computers and information management, fleet management, maintenance and fabrication, emergency services, land management, analytical laboratories, and environmental test facilities. Site-wide support includes grants to two states, three counties, and several universities, interagency agreements, a cooperative agreement with the University of Georgia, and payments-in-lieu-of-taxes. The goal is to ensure that the general purpose infrastructure and site services are always ready to safely, reliably, and effectively support the SRS programs in a cost-effective manner.

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

I. Mission Supporting Goals and Objectives:

MAJOR PROGRAM ELEMENTS (cont'd)

The Savannah River Cleanup Program (SRCP) is integrated and dedicated to elimination of the legacy that resulted from production of nuclear materials in the Cold War era. While many "at-risk" materials and wastes have been stabilized, many facilities deactivated, and several land areas remediated, much work remains to be done. The overall scope of the program is such that it is expected to be "long-term" and last well beyond FY 2006.

II. Funding Schedule:

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Remedial Actions/Release Sites	\$102,701	\$98,965	\$104,656	\$+5,691	+6%
Facilities Deactivation	14,693	3,307	0	-3,307	-100%
Spent Nuclear Fuel Stabilization	36,894	54,161	47,376	-6,785	-13%
Landlord	71,108	70,884	85,599	+14,715	+21%
Long-Term Monitoring	5,055	14,857	15,783	+926	+6%
High-Level Waste	375,243	371,629	382,659	+11,030	+3%
Transuranic Waste	9,733	9,032	9,312	+280	+3%
Mixed Low-Level Waste	38,750	13,410	10,304	-3,106	-23%
Low-Level Waste	25,198	33,551	27,309	-6,242	-19%
Hazardous Waste	6,477	5,741	5,200	-541	-9%
Other Waste	26,138	23,427	26,671	+3,244	+14%
Program Support	<u>11,366</u>	<u>8,348</u>	<u>15,364</u>	<u>+7,016</u>	<u>+84%</u>
 TOTAL, Savannah River	 <u>\$723,356</u>	 <u>\$707,312</u>	 <u>\$730,233</u>	 <u>\$+22,921</u>	 <u>+3%</u>

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

[PBS Numbers are Bracketed in the Text]

FY 1997

FY 1998

FY 1999

Remedial Actions/Release Sites

Assessments [SR-ER01, SR-ER02, SR-ER03, SR-ER04, SR-ER05, SR-ER06, SR-ER07]

The SRS Environmental Restoration program has identified 477 release sites for remedial action. Prior to 1997, 126 release site assessments were completed (26 percent of the total).

Assessment related technologies developed and deployed with assistance from the Technology Development program continue to speed the assessment process. These technologies include expedited site characterization, mobil laboratory, cone sipper, and environmental measurement while drilling.

\$24,371

\$56,752

\$29,810

- In FY 1997, 42 (9 percent of the total) release site assessments were completed. These release sites included the Miscellaneous Chemical Basin Metals Burning Pit, K-Area Reactor Seepage Basin, Fire Hose Training Facility, and site evaluation units as required by the sites' Federal Facilities Agreement (FFA).
- In FY 1998, another 42 (9 percent of the total) release site assessments are planned for completion. High risk release sites include the D-Area Oil Seepage Basin and H-Area Retention Basin. Lowers risk sites include the Chemical/Metal/Pesticide Pits, 108-4R Overflow Basin, C-Area Isolated Material Until, K-Area Reactor Seepage Basin, and site evaluation units required by the FFA.
- In FY 1999, 44 (9 percent of the total) release site assessments are planned for completion. High risk release sites include the Old TNX Seepage Basin, Radioactive Waste Burial Ground Solvent Tanks, and R-Reactor Seepage Basin. Lower risk sites include the 488D Ash Basin, Coal Pile Runoff (C,F,K, and P) Sites, Bingham Pump Outage Pit Isolated Hazardous Material Until, and site evaluation units required by the FFA.

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

Remedial Actions/Release Sites

FY 1997

FY 1998

FY 1999

Cleanups [SR-ER01, SR-ER02, SR-ER03, SR-ER04, SR-ER05, SR-ER06, SR-ER07]

Of the 477 total release sites identified for completion by the SRS Environmental Restoration program, 126 (26 percent of the total) have been completed prior to FY 1997. With the assistance of the Technology Development Program, ER expects to continue to develop and deploy innovative technologies. Technologies include vapor extraction units with horizontal wells, in situ bioremediation, barometric pumping/Baroball™ (uses natural atmospheric pressure fluctuations to remove volatile organic compounds (VOC's) from soil without mechanical pumping), catalytic oxidation of airstripper effluent, recirculation wells, and Fenton's Chemistry (in situ chemical oxidation of VOC's).

\$78,330

\$42,213

\$74,846

- In FY 1997, 39 (8 percent of the total) release sites were completed. Higher risk sites included closure of the Low Level Radioactive Waste Disposal Facility at A and D-Areas, construction of the Interim Cap at the Old Radioactive Waste Burial Ground, start of F and H Areas Groundwater Treatment System Operations, and completion of accelerated vegetation removal interim actions. Lower risk release site completions include an early removal action at the Ford Building Waste Unit.
- In FY 1998, 28 (6 percent of the total) release sites are planned for completion. These include the SRL Seepage Basin, Silverton Road and the A-Area Isolated Hazardous Material Unit remedial action completions. Remedial action starts include the 108-4R Overflow Basin and Old F-Area Seepage Basin.

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Remedial Actions/Release Sites</u>			
Cleanups (cont'd)			
<ul style="list-style-type: none"> In FY 1999, 26 (5 percent of the total) release sites are planned for completion. Included are remedial action completion of the high risk H-Area Tank Farm Groundwater, Old F-Area Seepage Basin closure, and lower risk 716-A Motor Shops Seepage Basin closure. Remedial action starts include D-Area Oil Seepage Basin, H-Area Retention Basin, and Chemical/Pesticide Isolated Hazardous Materials Unit. 			
Subtotal, Remedial Action/Release Sites	\$102,701	\$98,965	\$104,656
<u>Facilities Deactivation</u>			
Prior Year Deactivation Projects [SR-FA08; SR-FA09; SR-FA10; SR-FA15]	\$14,693	\$3,307	\$0
<ul style="list-style-type: none"> In FY 1997: <ul style="list-style-type: none"> Started deactivation of M-Area and C, P, and R-Reactor Areas. Eight facilities out of a total of 135 were deactivated. In FY 1998: <ul style="list-style-type: none"> Plan deactivation of M-Area and C, P, and R-Reactor Areas. No facilities out of a total of 135 will be deactivated. In FY 1999: <ul style="list-style-type: none"> No activities. 			

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Facilities Deactivation

F-Canyon Deactivation Project

Although specifically funding isn't requested for this effort, SRS is in the process of conducting early planning to initiate the F-Canyon deactivation project.

The F-Canyon Deactivation Project will provide for the planning and deactivation of the F-Canyon facility upon completion of nuclear materials stabilization activities at the SRS and the facility is determined to be surplus. Also, deactivation permits a reduction in the risk that the facility can present to the workers, public and environment. Deactivation permits a reduction to surveillance and maintenance costs necessary for safety, health, and environmental controls as the risks to these elements are reduced. The F-Canyon mission assignments are expected to be completed by FY 2000. To support the timely implementation of deactivation actions and early reduction of S&M costs, deactivation planning should begin three years prior to mission completion and deactivation initiation. The F-Canyon deactivation actions are expected to take about seven years to reduce S&M costs to a cost-effective minimum level. The objective of the deactivation project is to achieve a passive state for the facilities such that only periodic (quarterly) inspection and monitoring is required. The deactivated condition is projected to continue until final decisions on facility decontamination and decommissioning are made and implemented.

Subtotal, Facility Deactivation

\$14,693

\$3,307

\$ 0

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Spent Nuclear Fuel Stabilization</u>			
L-Reactor Spent Nuclear Fuel Project [SR-SF02]			
The L-Reactor spent nuclear fuel project provides basin storage of SRS SNF awaiting stabilization. It also provides receipt and basin storage of foreign and domestic research reactor SNF.	\$21,521	\$31,897	\$28,000
• In FY 1997:			
- Initiated receipt of off-site domestic and foreign research reactor (FRR) fuel. (\$1.9M FRR)			
• In FY 1998:			
- Continue to receive 21 foreign research reactor fuel casks and 27 domestic research reactor fuel casks. (\$4.0M FRR)			
- Complete additional modifications to L-Basin to enable the receipt of additional types of shipping casks directly into L-Basin, thus reducing on-site cask handling requirements.			
- Review and reach a decision on the movement of HEU and heavy water from K-Reactor to L-Reactor.			
• In FY 1999:			
- Continue to receive 32 foreign research reactor fuel shipments and 32 domestic research reactor shipments in support of this national mission requirement. (\$4.2M FRR)			
- Commence shipments of irradiated SRS spent nuclear fuel to the canyons.			
- Continue heavy water storage in L-Reactor storage tanks.			

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Spent Nuclear Fuel Stabilization</u> (cont'd)			
RBOF Spent Nuclear Fuel Project [SR-SF03]			
Basin operations in Receiving Basin for Off-site Fuels (RBOF) include activities to maintain water quality in water filled basin where spent nuclear fuel is stored to avoid corrosion of the fuel, reactor disassembly basin water deionizer regeneration, administrative programs including reporting requirements, and all activities required for spent nuclear fuel receipt, handling, storage, and shipment to other facilities. Spent nuclear fuel will be stored until a final disposition is approved and can be implemented. Continued on-site shipments from RBOF to L-Reactor Disassembly Basin are needed to conserve fuel storage space reserved for those casks and fuels that can only be handled in RBOF. Spent nuclear fuel in RBOF will begin to be transferred to the Transfer and Storage Services (T&SS) for interim storage in FY 2005, assuming the facility is available to receive spent nuclear fuel shipments at that time.	\$15,373	\$22,264	\$19,376
• In FY 1997:			
- Continued surveillance and maintenance and basin management activities to maintain water quality enabling the safe storage of spent nuclear fuel and ensuring that the facility continues to minimize risk to the environment, site workers and the general public.			
- Regeneration of water deionizers.			
- Received 18 casks of foreign research reactor fuel and 41 casks of domestic research reactor fuel, and made 26 on-site fuel shipments.			

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Spent Nuclear Fuel Stabilization</u> (cont'd)			
RBOF Spent Nuclear Fuel Project [SR-SF03] (cont'd)			
<ul style="list-style-type: none">• In FY 1998:<ul style="list-style-type: none">- Continue S&M and basin management activities to maintain water quality enabling the safe storage of spent nuclear fuel and ensuring that the facility continues to minimize risk to the environment, site workers and the general public.- Regeneration of water deionizers.- Continue off-site fuel receipts and on-site fuel shipments.- Projected receipts of off-site spent nuclear fuel will be 7 casks of foreign research reactor fuel and 8 casks of domestic.• In FY 1999:<ul style="list-style-type: none">- Continue S&M and basin management activities to maintain water quality enabling the safe storage of spent nuclear fuel and ensuring that the facility continues to minimize risk to the environment, site workers, and the general public.- Regeneration of water deionizers.- Projected receipts of off-site spent nuclear fuel will be 3 casks of foreign fuel.			
Subtotal, Spent Nuclear Fuel Stabilization	\$36,894*	\$54,161*	\$47,376*

* In addition to this funding, the Department's Cost of Work (COW) for Others program includes \$10,000,000 in FY 1997; \$1,060,000 in FY 1998; and will include \$12,500,000 in FY 1999 of equal budget authority to the amount of revenues received for the FRR receipt program implementation of both L-Reactor and RBOF.

NOTE: The metrics for spent nuclear fuel are classified and can be provided upon request.

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Landlord</u>			
Wackenhut Services, Inc. (WSI) Landlord Project [SR-DO02]			
The WSI project provides security services, primarily physical protection, for all SRS assets.	\$47,488	\$51,170	\$53,375
• In FY 1997:			
- Several major initiatives were performed to further streamline protection force (PF) operations. These initiatives included: Conversion of Barricade 3 from a 24 hour post to a day shift only post due to implementation of automated access control measures; deletion of day shift post in 703-B due to the implementation of automated access control measures; reduction of four 24 hour posts in FB-Line as a result of the recent vulnerability analysis conducted for the facility.			
• In FY 1998:			
- Increase of PF staffing in 100-L Area to support new protection measures identified in regard to storage of spent nuclear fuel.			
- Continue to enforce security requirements for the site as outlined in DOE Orders, the Site Safeguards and Security Plan and as specified in the Management and Operating (M&O) contract.			
• In FY 1999:			
- Continue to enforce security requirements for the site as outlined in DOE Orders, the Site Safeguards and Security Plan and as specified in the Management and Operating (M&O) contract.			

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Landlord</u> (cont'd)			
Savannah River Natural Resource Management and Research Institute [SR-DO03]	\$9,211	\$5,147	\$6,879
• In FY 1997:			
- Provided for the management of forest and land resources on a 300 square mile site.			
- Managed timber sales, documented endangered wildlife and plant life, controlled erosion, maintained site boundary.			
- Maintained 1,200 miles of secondary roads and maintained secondary bridges.			
- Supported soil stabilization and sediment control, protection of endangered species.			
- Conducted plant habitat surveys on 2,002 acres.			
- Prevented and suppressed wildland fires, prescribed burn approximately 19,000 acres, implemented of a site-wide wildlife and botany program, surveyed areas for new populations of threatened and endangered plant and animal species.			
- Implemented an ecological classification system.			
- Maintained a site-wide graphical information system.			
- Completed 4 miles of secondary road construction.			
- Provided vegetative maintenance of 7,697 acres.			
- Completed three watershed plans.			
- Completed watershed stabilization of 235 acres.			
- Completed 35 research studies.			

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Landlord (cont'd)

Savannah River Natural Resource Management and Research Institute [SR-DO03] (cont'd)

- In FY 1998:
 - Provide for the limited management of forest and land resources on a 300 square mile site.
 - Manage timber sales, limited documentation of endangered wildlife and plant life, perform control erosion, limited maintenance of site boundary.
 - Perform only critical maintenance of secondary roads and bridges.
 - Limited management of endangered species and quality habitats, limited restoration of wetlands, curtailed improvement of habitats for plants and animals, prevention of wildland fires at a reduced level, and critical maintenance of a site-wide graphical information system.
 - Prepare 3 watershed plans.
 - Accomplish 5,500 acres of watershed maintenance and 175 acres of watershed stabilization.
 - Research studies will be reduced to 65 percent of the FY 1997 level.
- In FY 1999:
 - Provide limited management of forest and land resources on a 300 square mile site.
 - Manage timber sales, limited documentation of endangered wildlife and plant life.
 - Perform only critical maintenance of secondary roads and bridges.
 - Limited management of endangered and threatened species.
 - Threatened and endangered species habitat management will be reduced by 90 percent.
 - Reduce levels of watershed planning, stabilization, and maintenance.
 - Limited maintenance of site boundary.

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Landlord</u> (cont'd)			
Savannah River Ecology Laboratory [SR-DO04]	\$9,286	\$9,031	\$8,396
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Conducted ecological studies in the areas of ecosystem management, environmental transport and biogeochemical cycling of contaminants from high level waste operations, radioecology and radionuclide environmental chemistry from past years of reactor operations and risk assessment of site operations. • In FY 1998: <ul style="list-style-type: none"> - Provide studies on the genetic effects of radiation on the flora and fauna at SRS as compared to highly contaminated areas in the Ukraine; assessments of the distribution, movement, fate and ecological risks associated with radionuclides in the environment; studies of the bioaccumulation of contaminants in organisms, and other studies on the effect of radionuclides on flora and fauna. • In FY 1999: <ul style="list-style-type: none"> - Focus research on the subsurface migration of contaminants and contaminant mixtures, physicochemical characterizations in soils and aquifer sediments, and spatial and temporal dynamics of cesium in the Par Pond reservoir. 			
Landlord Operating Projects [SR-IN12]	\$5,123	\$5,536	\$16,949
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Supported activities to acquire capital equipment and to execute General Plant Project construction items required to maintain safe and efficient operations for site-wide programs, safe storage of nuclear materials, and compliance with regulatory requirements and commitments. 			

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Landlord</u> (cont'd)			
Landlord Operating Projects [SR-IN12] (cont'd)			
• In FY 1997: (cont'd)			
- Provided infrastructure support for DOE-SR direct activities including: transportation, liaison between the Department of Energy (DOE) and the General Service Administration (GSA); rents, utilities and landlord services for DOE offices; maintenance of DOE radio equipment; multimedia services; telecommunications (telephones, computer services and maintenance); office supplies; and office relocations. Uncosted balances were used to augment the budget authority.			
• In FY 1998:			
- Continue FY 1997 activities to acquire capital equipment and to execute General Plant Project construction items required to maintain safe and efficient operations for site-wide programs, safe storage of nuclear materials, and compliance with regulatory requirements and commitments.			
- Continue activities to provide infrastructure support for DOE-SR.			
• In FY 1999:			
- Continue FY 1998 activities at an increase level of effort due to several years of insufficient funding.			
Subtotal, Landlord	<u>\$71,108</u>	<u>\$70,884</u>	<u>\$85,599</u>

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Long-Term Monitoring</u>			
Reactors Monitoring Project [SR-FA20]			
The reactors monitoring project provides surveillance and maintenance for reactor and support facilities for which the nuclear materials have been stabilized and removed.	\$2,486	\$8,871	\$9,979
• In FY 1997:			
- Included removal of the P-Area gas station tanks, decontamination of the C-Area deionizer pad, limited contamination area rollback efforts in P, C, and R-Areas.			
- Demolition of the 704-R building.			
- Characterization, sampling, and planning for deactivation of the R-Area disassembly basin.			
- Continued operation of the C-Area Decontamination Facility.			
• In FY 1998:			
- The P, C, and R-Areas will be safely managed in accordance with the authorized safety basis until such time as additional deactivation activities are funded and implemented.			
- Limited deactivation activities are planned to preserve the integrity of P, C, and R-Areas' safety envelope and to reduce the risk of radiological and hazardous material contamination spreading to the environment.			
• In FY 1999:			
- The P, C, and R-Areas will be safely managed in accordance with the authorized safety basis until such time as additional deactivation activities are funded and implemented.			
- Limited deactivation activities are planned to reduce the risk of radiological and hazardous material contamination spreading to the environment. It is expected that field work for the deactivation of the 105-R disassembly basin deactivation will commence in FY 1999.			
- Initiate removal of contaminated fuel rods associated with R-Reactor.			
- Continue support of the C-Area Decontamination Facility.			

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Long-Term Monitoring</u> (cont'd)			
M-Area Monitoring Project [SR-FA18]			
The M-Area Monitoring project provides surveillance and maintenance for facilities, which formerly made fuel and targets for the reactors. All nuclear materials have been removed.	\$ 0	\$3,119	\$4,784
• In FY 1997:			
- The M-Area was safely managed in accordance with the authorized safety basis until such time as additional deactivation activities are funded and implemented.			
- Limited deactivation activities were performed to reduce the risk of radiological and hazardous material contamination spreading to the environment including the continuation of the RCRA clean closure of the 341 mixed waste tanks and removal of the 311-M acid storage tanks.			
- A large amount of equipment in 320-M and 321-M was removed from the buildings and relocated to the EFCO plant in Barnwell, South Carolina in support of DOE economic assistance efforts.			
- Uncosted balances were used to perform these activities.			
• In FY 1998:			
- The M-Area will be safely managed in accordance with the authorized safety basis until such time as additional deactivation activities are funded and implemented.			
- Continue limited deactivation activities to reduce the risk of radiological and hazardous material contamination spreading to the environment.			
- It is expected that additional equipment sales, as part of DOE economic assistance efforts, will continue.			
- The M-Area waste storage tanks will be closed during the year per RCRA requirements.			

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Long-Term Monitoring (cont'd)

M-Area Monitoring Project [SR-FA18]

- In FY 1999:
 - The M-Area will be safely managed in accordance with the authorized safety basis until such time as additional deactivation activities are funded and implemented.
 - Continue limited deactivation activities to reduce the risk of radiological and hazardous material contamination spreading to the environment.
 - It is expected that the M-Area process sewer and the Liquid Effluent Treatment Facility will be closed upon completion of the plating line sludge vitrification contract with GTS-Duratek.

F-Area Monitoring Project [SR-FA16]

The F-Area Monitoring project supports maintaining facilities that have been deactivated in a cost-effective minimum surveillance and maintenance (S&M) state pending decisions and implementation of final decontamination and decommissioning. Since stabilization, and proposed disposition, processing activities will be continuing in the F-Area facilities through 2002, the F-Canyon and FB-Line facilities will not have achieved a deactivated state. The former Naval Fuels Facility, Building 247-F, and associated support facilities, is the only facility that has, and is projected to, undergo deactivation prior to F-Canyon/FB-Line mission completion. The deactivated state allows minimum S&M actions to be implemented to maintain safety, health, and environmental requirements. Deactivated facilities are monitored and inspected quarterly to ensure safe conditions are maintained.

\$2,569

\$2,867

\$1,020

- In FY 1997:
 - Completed the deactivation of Building 247-F, and associated facilities.

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Long-Term Monitoring</u> (cont'd)			
F-Area Monitoring Project [SR-FA16] (cont'd)			
• In FY 1998:			
- Conduct quarterly monitoring and inspection of Building 247-F and associated facilities.			
• In FY 1999:			
- Continue quarterly monitoring and inspection of Building 247-F and associated facilities.			
Subtotal, Long-Term Monitoring	<u>\$5,055</u>	<u>\$14,857</u>	<u>\$15,783</u>

High-Level Waste [SR-HL01, SR-HL02, SR-HL03, SR-HL04, SR-HL05, SR-HL06 and SR-HL12]

This program supports system safe operation; provides for the safe treatment and storage of high-level waste (HLW) through the safe operation (including surveillance and maintenance) of the following major activities: F and H Area Tank Farms, 2H and 2F Evaporators, In-Tank Precipitation (ITP), Extended Sludge Processing (ESP), and the Defense Waste Processing Facility (DWPF) vitrification facility.

	\$375,243	\$371,629	\$382,659
• In FY 1997:			
- Continued safety upgrades to ITP to address benzene issues.			
- Achieved space gain of 2.5 million gallons in tank farms through evaporation.			
- Completed closure of 1 HLW tank; and commenced grout filling of a second HLW tank.			
- Completed construction of Late Wash Facility.			
- Completed construction of Replacement High-Level Waste Evaporator (RHLWE).			
- Replaced service piping and gang valve systems for 4 HLW tanks.			
- Continued to provide design and construction of waste removal facilities and infrastructure.			

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>High-Level Waste</u> [SR-HL01, SR-HL02, SR-HL03, SR-HL04, SR-HL05, SR-HL06 and SR-HL12] (cont'd)			
• In FY 1997: (cont'd)			
- Increased production to 169 canisters at DWPF from 64 canisters in FY 1996.			
• In FY 1998:			
- Achieve space gain of 3.0 million gallons in tank farm through evaporation.			
- Begin demonstration of alternative waste removal techniques for salt in HLW tanks.			
- Close the second HLW tank.			
- Produce 200 canisters of HLW at DWPF.			
• In FY 1999:			
- Commence operation of the Replacement High-Level Waste Evaporator (RHLWE).			
- Achieve space gain of 3 million gallons in tank farms through evaporation.			
- Restart the In-Tank Precipitation Facility (ITP)			
- Initiate operation of Late Wash Facility.			
- Begin operation of the Salt Process Cell.			
- Continue HLW System Upgrades.			
- Produce 200 canisters of HLW at DWPF.			

Treatment

- In FY 1997, treated 1,100 cubic meters.
- In FY 1998, plan to treat 2,453 cubic meters.
- In FY 1999, plan to treat 4,042 cubic meters.

Storage

- In FY 1997, stored 127,985 cubic meters.
- In FY 1998, plan to store 130,615 cubic meters.
- In FY 1999, plan to store 129,038 cubic meters.

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>High-Level Waste</u> [SR-HL01, SR-HL02, SR-HL03, SR-HL04, SR-HL05, SR-HL06 and SR-HL12] (cont'd)			

Disposal

- In FY 1997, made disposal ready 169 canisters. (233 cumulative total canisters)
- In FY 1998, will have 200 canisters disposal ready. (433 cumulative total canisters)
- In FY 1999, will have 200 canisters disposal ready. (633 cumulative total canisters)

Subtotal, High-Level Waste

	<u>\$375,243</u>	<u>\$371,629</u>	<u>\$382,659</u>
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Transuranic Waste [SR-SW02]

The Transuranic (TRU) Waste program provides funding for the safe, environmentally sound operations of the TRU facilities which have an inventory of approximately 28,000 55-gallon drums and other assorted containers of TRU waste containing 700,000 curies of radioactivity:

- In FY 1997:
 - Received waste, conducted surveillance and maintenance, etc.
 - TRU drum retrieval operations, vent and purge operations, and characterization of approximately 2,400 55 gallon drums.
 - Performed non-destructive (ND) analysis and ND examination on 1,600 drums.
 - Developed a strategy for shipping waste to WIPP in FY 1999.
 - Disposed 100 LLW drums formally managed as TRU.

	\$9,733	\$9,032	\$9,312
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POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Transuranic Waste [SR-SW02] (cont'd)

- In FY 1998:
 - Complete the retrieval and venting of 4,000 55-gallon drums.
 - Continue the segregation of MLLW drums from Mixed-TRU waste drums.
 - Dispose of approximately 900 LLW drums which were formerly managed as TRU waste.
 - Perform equipment upgrades, training and procedure development and startup activities necessary to support the shipment of TRU waste to WIPP.
 - Develop various plans that support inventory disposition either to WIPP or low-level waste disposal.
 - Complete development, test and commence operation of a new process to assay Pu-238.
- In FY 1999:
 - Complete the retrieval and venting of 2,400 55 gallon drums.
 - Continue the segregation of MLLW drums from Mixed-TRU waste drums.
 - Commence the repackaging of polyboxes for low-level waste disposal or for WIPP disposal.

Treatment

- In FY 1997, treated 1,306 cubic meters.
- In FY 1998, will treat 0 cubic meters.
- In FY 1999, will treat 0 cubic meters.

Storage

- In FY 1997, stored 10,834 cubic meters.
- In FY 1998, will store 11,475 cubic meters.
- In FY 1999, will store 11,625 cubic meters.

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Transuranic Waste</u> [SR-SW02] (cont'd)			
Disposal			
<ul style="list-style-type: none"> • In FY 1997, made 0 cubic meters disposal ready. • In FY 1998, will have 0 cubic meters disposal ready. • In FY 1999, will have 0 cubic meters disposal ready. 			
Subtotal, Transuranic Waste	\$ 9,733	\$ 9,032	\$ 9,312
<u>Mixed Low-Level Waste</u> [SR-SW01, SR-SW03, SR-SW07]			
The Mixed Low-Level Waste budget provides funding for the safe, environmentally sound operations of the Solid Waste Mixed Waste facilities which have an inventory of approximately 1,458 cubic meters (7,000 55-gallon drum equivalents) of mixed waste containing 400,000 curies of radioactivity.			
	\$38,750	\$13,410	\$10,304
<ul style="list-style-type: none"> • In FY 1997: <ul style="list-style-type: none"> - Continued treatment, storage, and disposal of mixed waste. - Transferred 40,000 gallons of solvent from tanks 29 and 30 to new regulatory compliant tanks. - Submitted annual update to the Site Treatment Plan. - Maintain CIF operations to support mixed low-level waste. • In FY 1998: <ul style="list-style-type: none"> - Continue treatment, storage and disposal of mixed waste. - Decontamination and Decommissioning of Old Solvent Trailer. - Begin procurement activities for LLW lead decontamination. - Submit applications to Toxic Substances Control Act (TSCA) Incinerator and INEEL for treatment of polychlorinated biphenyl (PCBs) and Tank E-3-1 clean out material respectively. 			

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

FY 1997

FY 1998

FY 1999

Mixed Low-Level Waste [SR-SW01, SR-SW03, SR-SW07] (cont'd)

- In FY 1998: (cont'd)
 - Continue operations of New Solvent Storage Tanks.
 - Submit annual update to the Site Treatment Plan.
 - Maintain CIF operations to support mixed low-level waste.
- In FY 1999:
 - Continue treatment, storage and disposal of mixed waste.
 - Continue treatment activities in support of the Site Treatment Plan.
 - Prepare contract for vendor treatment of two additional waste streams.
 - Complete procurement activities for LLW lead decontamination.
 - Continue operations of New Solvent Storage Tanks.
 - Submit annual update to the Site Treatment Plan.
 - Continue operation of CIF.

Treatment

- In FY 1997, treated 1,072 cubic meters.
- In FY 1998, will treat 397 cubic meters.
- In FY 1999, will treat 219 cubic meters.

Storage

- In FY 1997, stored 1,332 cubic meters.
- In FY 1998, will store 3,343 cubic meters.
- In FY 1999, will store 3,403 cubic meters.

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Mixed Low-Level Waste</u> [SR-SW01, SR-SW03, SR-SW07] (cont'd)			
Disposal			
• In FY 1997, disposed of 0 cubic meters.			
• In FY 1998, will dispose of 47 cubic meters.			
• In FY 1999, will dispose of 22 cubic meters.			
Subtotal - Mixed Low-level Waste	\$38,750	\$13,410	\$10,304
<u>Low-Level Waste</u> [SR-SW01, SR-SW04, SR-HL08, SR-FA18]			
The Low-Level Waste program provides funding for the safe handling, treatment, storage, and disposal of low-level waste at the SRS and continuation of safe operations (including surveillance and maintenance) and regulatory commitments.	\$25,198	\$33,551	\$27,309
• In FY 1997:			
- Continued treatment, storage, and disposal of low-level waste utilizing on-site (M-Area) and off-site commercial facilities.			
- Completed trial burn at CIF for size reduction of low-level waste.			
• In FY 1998:			
- Continue treatment, storage, and disposal of low-level waste utilizing on-site and off-site commercial facilities.			
- Initiate the Waste Financial Accountability System and transfer of funds to generators for solid waste management operations.			
- Continue operation of CIF to size reduce low-level waste.			
• In FY 1999:			
- Continue treatment, storage, and disposal of low-level waste utilizing on-site and off-site commercial facilities.			
- Continue size reduction of low-level waste at CIF.			

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Low-Level Waste</u> [SR-SW01, SR-SW04, SR-HL08, SR-FA18] (cont'd)			
Treatment			
• In FY 1997, treated 2,533 cubic meters.			
• In FY 1998, will treat 14,911 cubic meters.			
• In FY 1999, will treat 17,968 cubic meters.			
Storage			
• In FY 1997, stored 13,666 cubic meters.			
• In FY 1998, will store 23,104 cubic meters.			
• In FY 1999, will store 16,518 cubic meters.			
Disposal			
• In FY 1997, disposed of 5,645 cubic meters.			
• In FY 1998, will dispose of 9,941 cubic meters.			
• In FY 1999, will dispose of 9,836 cubic meters.			
Subtotal, Low-Level Waste	<u>\$25,198</u>	<u>\$33,551</u>	<u>\$27,309</u>

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Hazardous Waste</u> [SR-SW05]			
The Hazardous Waste program provides funding for the safe handling, treatment, storage, and disposal of hazardous waste at the SRS and continuation of safe operations (including surveillance and maintenance) and regulatory commitments.	\$6,477	\$5,741	\$5,200
• In FY 1997:			
- Continued treatment, storage, and disposal of hazardous waste utilizing on-site and off-site facilities.			
• In FY 1998:			
- Continue treatment, storage, and disposal of hazardous waste utilizing on-site and off-site facilities.			
• In FY 1999:			
- Continue treatment, storage, and disposal of hazardous waste utilizing on-site and off-site facilities.			
- Ship radioactive polychlorinated biphenyl to Oak Ridge for treatment.			
Treatment			
• In FY 1997, treated 534 cubic meters.			
• In FY 1998, will treat 489 cubic meters.			
• In FY 1999, will treat 304 cubic meters.			
Storage			
• In FY 1997, stored 1,018 cubic meters.			
• In FY 1998, will store 727 cubic meters.			
• In FY 1999, will store 527 cubic meters.			

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Hazardous Waste</u> [SR-SW05] (cont'd)			
Disposal			
• In FY 1997, disposed 962 cubic meters.			
• In FY 1998, will dispose 488 cubic meters.			
• In FY 1999, will dispose 295 cubic meters.			
Subtotal, Hazardous Waste	\$6,477	\$5,741	\$5,200
<u>Other Waste</u> [SR-SW06, SR-HL07]			
The Other Waste program provides funding for the safe handling and disposal of sanitary waste at the SRS and treatment of low-level waste water in the Effluent Test Facility (ETF) generated in the F and H Separations and Tank Farm Areas.			
	\$26,138	\$23,427	\$26,671
• In FY 1997:			
- Continued disposal of sanitary waste utilizing on-site and off-site facilities.			
• In FY 1998:			
- Continue disposal of sanitary waste utilizing on-site and off-site facilities.			
• In FY 1999:			
- Continue disposal of sanitary waste utilizing on-site and off-site facilities.			
- Initiate and complete closure of the Interim Sanitary Landfill (ISL).			
Treatment			
• In FY 1997, treated 0 cubic meters.			
• In FY 1998, will treat 0 cubic meters.			
• In FY 1999, will treat 0 cubic meters.			

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Other Waste</u> [SR-SW06, SR-HL07] (cont'd)			
Storage			
• In FY 1997, stored 0 cubic meters.			
• In FY 1998, will store 0 cubic meters.			
• In FY 1999, will store 0 cubic meters.			
Disposal			
• In FY 1997, disposed 5,727 cubic meters.			
• In FY 1998, will dispose of 5,727 cubic meters.			
• In FY 1999, will dispose of 6,000 cubic meters.			
Subtotal, Other Waste	\$26,138	\$23,427	\$26,671
<u>Program Support</u> [SR-DO07]	\$7,841	\$2,845	\$8,209
• In FY 1997:			
- Funding provided for payment-in-lieu-of-taxes (PILT), South Carolina Universities Research and Education Foundation (SCUREF), public reading room, South Carolina Water Resources Commission (SCWRC).			
• In FY 1998:			
- Supports payment-in-lieu-of-taxes.			

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Program Support</u> (cont'd)			
<ul style="list-style-type: none"> In FY 1999: <ul style="list-style-type: none"> - Supports payment-in-lieu-of-taxes, Historically Black Colleges and Universities (HBCU), South Carolina Universities Research and Education Foundation, interagency agreements with the Corps of Engineers, South Carolina Water Resources Commission, and the US Geological Surveys. - Supports the SRS site specific advisory boards, Massie Chair of Excellence, and the Training Center for Excellence. - Supports the SRS Contractor Workforce Security Clearances (\$2,241). 			
Subtotal, DOE Program Support	<u>\$7,841</u>	<u>\$2,845</u>	<u>\$8,209</u>
<u>DOE External Program Support</u> [SR-DO05]	\$3,525	\$5,503	\$7,155
<ul style="list-style-type: none"> In FY 1997: <ul style="list-style-type: none"> - Supported the South Carolina Department of Health and Environmental Control (SCDEHC) for oversight of SR activities carried out under the Federal Facilities Agreement. - Funded program support to the Environmental Restoration Division by the U.S. Corp of Engineers and U.S. Forest Service. - Funded Emergency Preparedness/Planning, Emergency Monitoring and Oversight, and the Georgia Emergency Management Agency. In FY 1998: <ul style="list-style-type: none"> - Supports FY 1997 activities to meet regulatory commitments. 			

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>DOE External Program Support</u> [SR-DO05] (cont'd)			
• In FY 1999:			
- Supports FY 1998 activities to meet regulatory commitments.			
Subtotal, DOE External Program Support	<u>\$3,525</u>	<u>\$5,503</u>	<u>\$7,155</u>
Total, Program Support	<u>\$11,366</u>	<u>\$8,348</u>	<u>\$15,364</u>
TOTAL, SAVANNAH RIVER	<u>\$723,356</u>	<u>\$707,312</u>	<u>\$730,233</u>

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

Explanation of Funding Changes from FY 1998 to FY 1999:

Remedial Actions/Release Sites: Acceleration remediation in groundwater treatment (+\$32,633), and waste site closures (-\$26,942). +\$5,691

Facility Deactivation: Decrease in funding due to deactivation of M-Area and C, P, and R-Reactors Areas. -\$3,307

Spent Nuclear Fuel Stabilization: (-\$6,785)

Complete L-Basin modification work for acceptance of multi types of shipping casks. -\$3,897

Decrease in the number of SNF casks received at RBOF from foreign and domestic research reactors. -\$ 2,888

Landlord: (-\$14,715)

Restore funding to forest service management, sediment control, wildlife and botany program to support regulatory requirements. +\$1,732

Decrease in SR Ecology Laboratory funding as studies are completed. -\$635

Restore funding for utilities, transportation, telecommunications, radio equipment after several years of increased deterioration. Increase in the capital equipment and general plant project funding. +\$11,413

Increase in Wackenhut Services due to additional security force requirements. +\$2,205

Long-Term Monitoring: Increase to initiate removal of contaminated fuel rods with R-Reactor and M-Area Monitoring (+\$2,773); offset by reduction in the F-Area Monitoring project (-\$1,847). +\$926

High-Level Waste: Increase in funding associated with tank farm operations. +\$11,030

Transuranic Waste: Increase to commence repackaging of poly boxes for LLW disposal.

+\$280

POST 2006 COMPLETION - DEFENSE - SAVANNAH RIVER (cont'd)

Explanation of Funding Changes from FY 1998 to FY 1999:

<u>Mixed Low-Level Waste:</u> Decrease due to less treatment and disposal in FY 1999.	- \$3,106
<u>Low-Level Waste:</u> Reduction in number of cubic meters of low-level waste treated at CIF.	- \$6,242
<u>Hazardous Waste:</u> Decrease due to less storage costs in FY 1999.	- \$541
<u>Other Waste:</u> Increase due to initiate and complete closure of the Interim Sanitary landfill in FY 1999.	+ \$3,244
<u>Program Support:</u> Increase in funding due to directed changes in site mission support, e.g. HBCUs, interagency agreements, etc.	+ \$4,775
Increase in funding to support security investigation requirement.	+ <u>\$2,241</u>
Total Funding Change, Savannah River	+ <u>\$22,921</u>

POST 2006 COMPLETION - DEFENSE

MULTI-SITE ACTIVITIES

I. Mission Supporting Goals and Objectives:

MISSION

The Multi-Site Activities defense account includes funding for Environmental Management (EM) programs that support activities at a number of sites. The majority of the funds requested in the Multi-Site Activities defense account are required for the Federal contribution to the Uranium Enrichment Decontamination and Decommissioning (UE D&D) fund (92 percent). The Multi-Site Activities budget consists of Headquarters technical support efforts, Transportation and Packaging functions, Emergency Management activities, Analytical/Characterization Services and Pollution Prevention program functions. These multi-site programs will allow EM to better coordinate EM-wide and DOE-wide program efforts and avoid overlaps and inconsistencies. The EM program is being responsive to the General Accounting Office (GAO) and others who have pushed for a greater emphasis on a more National focus for the EM programs.

The Department of Energy's transportation management system will undergo substantial change in the next 10 years as large quantities of radioactive and mixed waste and other contaminated materials produced by site remediation and decommissioning are shipped for treatment and disposal. It is expected that within 5 years the number of hazardous material shipments will increase four-fold.

FY 1999 PROGRAM

Headquarters

The role of the Headquarters Federal work force is to provide leadership and support, establish and implement National and Departmental policy, conduct analyses and integrate activities across sites. Headquarters also supports education and training to improve the technical capability of the EM staff pursuant to the Defense Nuclear Facilities Safety Board Recommendation 93-3, "Improving the Technical Capabilities in Defense Nuclear Facility Programs". Headquarters staff also provides for technical assistance in assessing and establishing site baselines through data collection and analysis, all of which support the accelerated

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

I. Mission Supporting Goals and Objectives: - (cont'd)

Headquarters (cont'd)

closure of EM sites. Headquarters assesses the progress of the EM sites in order to track and report to Congress, interested stakeholders, and the public on the status of the program. Also, funds for EM Headquarters support training under the Hazardous Waste Operations and Emergency Response (HAZWOPER) Standards. The Environmental and Regulatory Analysis program advocates and champions the resolution of environmental, legal, regulatory and contractor work force restructuring issues that cut across many sites and do not readily fall within the purview of the primary business lines. The program provides policy direction and guidance to operations and EM program offices to successfully implement the negotiation and enhancement of environmental compliance and cleanup agreements thus aiding in achieving 2006 goals and objectives. Guidance and technical assistance is also provided on the National Environmental Policy Act (NEPA) compliance issues and acts as EM's NEPA Compliance Officer to promote cost effective compliance across the EM program.

Transportation and Packaging

In FY 1997, a Memorandum of Agreement was signed establishing the National Transportation Program (NTP) to be administered jointly by Headquarters, Albuquerque Operations Office, and Idaho Operations Office. Within the team arrangement, Headquarters will have primary responsibility for program policy and coordination, the Albuquerque Operations Office will have primary responsibility for ensuring efficient transportation operations, and the Idaho Operations Office will have primary responsibility for systems engineering functions. The NTP was established to enhance the DOE's operational and logistics functions and to ensure continued development and implementation of systems engineering to improve those functions and reduce the DOE's costs associated with transportation and packaging activities.

The National Transportation program develops and maintains the DOE baseline transportation resources, including policy, to assure the availability of safe, regulatory compliant, economical, efficient and timely transportation for DOE materials through: (1) the identification of transport needs of all DOE programs, particularly in supporting EM's focus on project acceleration and site closure by FY 2006; (2) resolution of transport issues at the program level; (3) maintenance of a corporate institutional

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

I. Mission Supporting Goals and Objectives: - (cont'd)

Transportation and Packaging (cont'd)

program to interact with national and regional stakeholders; (4) vigorous examination of all projected DOE material flows; (5) conducting a forward-looking, aggressive transportation technology program to resolve complex transportation and packaging problems and address regulatory issues; and (6) operational management of all packaging and shipping activities both on and off-site (excluding weapons and weapon components).

The Department's transportation and packaging activities are one of the most heavily regulated functions because of the hazardous material (particularly radioactive) that are shipped. Noncompliance with regulations carries heavy penalties (both criminal and civil). Transportation is an area of public scrutiny due to the perceived hazards associated with the transportation of DOE materials. Transportation and packaging activities with DOE are covered primarily under 49 U.S.C. 5101, the Department of Transportation (49 CFR), the Nuclear Regulatory Commission (10 CFR), and the Environmental Protection Agency (40 CFR). In addition, there are numerous DOE Orders governing transportation and packaging activities including DOE Order 460.1, "Document Packaging and Transportation Safety" and DOE Order 460.2, "Departmental Materials Transportation and Packaging Management".

Emergency Management

The Emergency Management program ensures that Federal, tribal, state and local responders have access to the plans, training, and technical assistance necessary to safely, efficiently and effectively respond to transportation accidents involving DOE unclassified radioactive materials. Also, this program ensures the Office of Environmental Management Headquarters personnel will be able to provide timely support to field responders during an emergency at a facility.

An Emergency Management program in the Office of Environmental Management is maintained, in coordination with the Office of Emergency Management, in the Office of Nonproliferation and National Security. DOE Order 151.1, "Comprehensive Emergency Management System", requires the Office of Environmental Management to ensure the implementation of policy and DOE Order requirements related to emergency management facilities/sites and operations offices under its cognizance. It is also

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

I. Mission Supporting Goals and Objectives: - (cont'd)

Emergency Management (cont'd)

required to establish and maintain a system for handling emergency occurrences involving unclassified shipments of radioactive materials. The Office of Environmental Management implements the Transportation Emergency Preparedness Program and the Facility Emergency Preparedness Program to address these requirements.

Regulatory drivers from which requirements for the EM Emergency Preparedness Programs are derived include:

43 CFR Public Lands: Interior:

- Part 350.6 Requires Federal agencies to be available upon request to assist States and localities in the development of offsite radiological emergency plans.
- Part 351.24 Establishes the coordinating committee and the regional assistance committees, which include DOE, for radiological emergency planning and preparedness.

49 CFR Transportation:

- Part 175.45 Requires each operator who transports hazardous materials to report fire, breakage, or spillage of suspected radioactive contamination as a result of an occurrence involving radioactive materials.
- Part 175.700 Specifies special limitations and requirements for shipment of radioactive materials. It requires the carrier to notify DOE or local authorities to assist or provide advice following any incident. DOE should be notified in cases of obvious leakage.

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

I. Mission Supporting Goals and Objectives: - (cont'd)

Analytical/Characterization Services

The National Analytical Management Program is administered by the Idaho Operations Office and will operate under the following areas:

Quality Assurance

This program is designed to provide a system that produces data in accordance with quality objectives. This area contains several performance evaluation programs such as: Quality Assessment Program (QAP) which is managed at the Environmental Measurements Laboratory (EML) in New York, and the Mixed Analyte Performance Evaluation Program managed at the Radiological Environmental Science Laboratory (RESL) in Idaho; the Integrated Performance Evaluation Program, the National Environmental Laboratory Accreditation Conference, and the Multi-Agency Radiation Laboratory Protocol. These programs are intended to target directed planning for analytical activities. The goal is to develop standards and tools to achieve defensible, reliable, analytical data for environmental decision making and to provide standards, oversight testing programs, quality control materials, and technical assistance to support analytical capabilities of DOE-Environmental Quality Laboratories.

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

I. Mission Supporting Goals and Objectives: - (cont'd)

Analytical/Characterization Services (cont'd)

Resource Management

This area includes Sample Management which has sub-components such as: Sample Management Offices (SMO), Privatization Activities, Field Sample Management Programs, National Sample Management Programs, workshops, policy and guidance. Laboratory Issues includes: Needs and capacity assessments, contracting guidance, Department of Energy Electronic Master Specification (DEEMS), International Association of Environmental Testing Laboratories (IATL), DOE Analytical Managers Group (DAM), and Waste and Cost. Information Systems has the following sub-components: National Sample Tracking System (NSTS), Monitoring and Information Management System (MIMS), Directory of Environmental Management Sample Analyses (DEMSAR), EDEN, and a home page on the Internet. The goal is to improve acquisition and delivery of analytical services and inter-site information exchange and provide innovative systems to coordinate and monitor sample analysis activities for DOE environmental programs.

Data Integration

This area incorporates directed planning and decision theory through programs such as Data Quality Objectives (DQO), and Streamlined Approach for Environmental Restoration (SAFER), Data Validation for Radiochemistry, Decision Theory, Technology Verification, and Holding Time Studies. The goal is to have directed planning processes similar to DQO and SAFER be adopted by the field units for project planning involving data collection for environmental quality.

Methods Development

This includes Methods Compendium, Database, Methods Validation, and Business Practices, which is subdivided into the following sub-categories: Acquisition Strategy, Utilization Model, and Performance Measures. The goal is to provide proven methodology to produce defensible data for environmental decision making.

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

I. Mission Supporting Goals and Objectives: - (cont'd)

Analytical/Characterization Services (cont'd)

Administrative

Sub-components include: General Accounting Office (GAO) and Inspector General (IG) response, budget, defensible program management, and planning (strategic, operational and business). The goal is to promote inter/intra-agency activities related to environmental data quality.

Compliance drivers for this program are: General Accounting Office Report No. RCED-95-118, "Nuclear Facility Cleanup, Centralized Contracting of Laboratory Analyses Would Produce Budgetary Savings"; Environmental Protection Agency's (EPA) Office of Inspector General Report, "Laboratory Data Quality at Federal Facility Superfund Sites" and the DOE IG Report, IG-0374, "Audit of the DOE's Commercial Laboratory Quality Assurance Evaluation Program".

Pollution Prevention

The Office of Pollution Prevention, managed through Headquarters, coordinates pollution prevention program activities for the entire Department and provides resources to ten DOE operations/field offices. Its mission is to reduce the generation of all waste streams in order to minimize the impact of the Department's operations on the environment, reduce operational costs, and improve the safety and health of its operations. DOE operations/field offices independently manage pollution prevention programs at their reporting sites.

The Pollution Prevention program is part of the Office of Environmental Management's ongoing efforts and Draft 2006 Plan to reduce waste generation by the Department and enhance efficiency through cost reduction. Existing waste reduction goals for the Department are included in the Draft 2006 Plan and a performance measure for waste reduction from environmental restoration and stabilization program activities is being finalized.

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

I. Mission Supporting Goals and Objectives: - (cont'd)

Pollution Prevention (cont'd)

The FY 1999 pollution prevention budget will continue to fund operations/field office programs to reduce the waste from routine operations at DOE sites. Specifically, the Secretary of Energy established the following DOE-wide goals to be achieved by December 31, 1999:

- Reduce by 50 percent the generation of radioactive waste (baseline - 40,807 cubic meters)
- Reduce by 50 percent the generation of hazardous waste (baseline - 12,424 cubic meters)
- Reduce by 50 percent the generation of low-level mixed waste (baseline - 3,322 cubic meters)
- Reduce by 33 percent the generation of sanitary waste (baseline - 112,244 cubic meters)
- Recycle 33 percent of sanitary waste from all operations
- Increase procurement of Environmental Protection Agency designated recycled products to 100 percent, except where they are not commercially available at a reasonable price or do not meet performance standards

The DOE achieved the 50 percent reduction goals for radioactive, hazardous, and low-level mixed waste at the end of 1996. In addition, the Department met the recycling goals of 33 percent in 1996. Additional effort will be required to meet the sanitary waste (21 percent reduction at the end of 1996) and affirmative procurement (60 percent in 1996) goals. Funds are required to reduce waste from new waste generating operations.

Pollution prevention is required by Federal and State statutes and by Executive Orders including the Pollution Prevention Act; Resource Conservation and Recovery Act (RCRA); Emergency Planning and Community Right-to-Know Act (EPCRA); and Executive Orders 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements and 12873, Federal Acquisition, Recycling, and Waste Prevention.

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

II. Funding Schedule:

<u>Program Activity</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
Intergovernmental and Public Accountability	\$8,788	\$6,800	\$5,800	\$-1,000	-15%
Training and Education	1,250	1,000	900	-100	-10%
Technical Programmatic Support	30,677	40,304	15,936	-24,368	-60%
Hazardous Waste Operations and Emergency Response (HAZWOPER)	8,000	7,500	7,500	0	0%
Environmental and Regulatory Analysis . .	733	1,491	518	-973	-65%
Transportation and Packaging	12,764	11,144	11,918	+774	+7%
Emergency Management	3,484	2,591	3,218	+627	+24%
Analytical/Characterization Services	5,817	5,205	3,000	-2,205	-42%
Pollution Prevention	23,153	20,975	12,790	-8,185	-39%
Federal Contribution to UE D&D Account	<u>376,648</u>	<u>388,000</u>	<u>398,088</u>	<u>+10,088</u>	<u>+3%</u>
 TOTAL, Multi-Site Activities.	<u>\$471,314</u>	<u>\$485,010</u>	<u>\$459,668</u>	<u>\$-25,342</u>	<u>-5%</u>

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

[PBS Numbers are bracketed in the text]

FY 1997 **FY 1998** **FY 1999**

Intergovernmental and Public Accountability [HQ-PM-001]

\$ 8,788 \$ 6,800 \$ 5,800

- In FY 1997:
 - Produced a charter and an action plan for a National Dialogue on nuclear materials and waste.
 - Responded to nearly 100,000 inquiries to the Center for Environmental Management Information (CEMI).
 - Maintained and developed EM's government-to-government relationship with ten tribes designed to foster cooperation on waste shipment and environmental restoration efforts.
- In FY 1998:
 - Continue a National Dialogue on nuclear materials and waste.
 - Continue to respond to public inquiries on the EM program.
 - Continue to maintain and develop EM's government-to-government relationship with ten tribes designed to foster cooperation on waste shipment and environmental restoration efforts.

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Intergovernmental and Public Accountability (cont'd)

- In FY 1999:
 - Explore ways to expedite cleanup schedules and reduce costs to determine future uses and acceptable cleanup goals for each site and its facilities.
 - Establish DOE policies to improve institutional controls and encourage the marketing of DOE facilities.
 - Continue to respond to public requests for information on the EM program.
 - Modify Tribal agreements to better address transportation issues related to spent nuclear fuel, radioactive and transuranic waste shipping to the Waste Isolation Pilot Plant.

Subtotal, Intergovernmental and Public Accountability

\$ 8,788 \$ 6,800 \$ 5,800

Training and Education: [HQ-PM-001]

\$ 1,250 \$ 1,000 \$ 900

- In FY 1997:
 - Began implementation of training and education programs to resolve DNFSB Recommendation 93-3 "Improving the Technical Capabilities in Defense Nuclear Facility Programs", involving upgrading Federal employee technical competence in focused areas related to health and safety concerns.
 - Transferred the National Training program to the field to ensure it is correctly focused on improving the technical expertise of those employees directly involved with day-to-day health and safety responsibilities.

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Training and Education (cont'd)

- In FY 1998:
 - Continue to implement training and education programs to resolve DNFSB Recommendation 93-3.
 - Fully develop the Technical Qualifications Program.
- In FY 1999:
 - Continue to implement training and education programs to resolve DNFSB Recommendation 93-3.

Subtotal, Training and Education

\$ 1,250 \$ 1,000 \$ 900

Technical Programmatic Support:

\$ 30,677 \$ 40,304 \$ 15,936

- In FY 1997:
 - Completed the Congressionally mandated Linking Legacies Report on the nature, magnitude and origins of the Department's environmental legacy and evaluated long-term environmental stewardship needs. (PBS #HQ-PM-001)
 - Initiated development of a geographic information system (GIS) to track the location of contaminated facilities at the Department's sites, particularly in support of long-term stewardship efforts. Evaluated the status of and disposition planning for materials in inventory and excess facilities. (PBS #HQ-PM-001)

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Technical Programmatic Support (cont'd)

- In FY 1997: (cont'd)
 - Provided for EM-wide information management infrastructure activities. Also provided for hardware, software, maintenance and upgrades to support management information systems. [HQ-PM-001]
 - Supported Interagency Agreement with the Agency for Toxic Substances and Disease Registry (health studies); program management plans and procedures; management support systems; strategic planning; performance systems; cost/schedule studies. [HQ-100-AA]
 - Supported selected Headquarters directed field activities to achieve cost efficiencies and increase the effectiveness of these activities for accelerating stabilization and deactivation opportunities and performance systems; includes specific technical support and program integration. [HQ-6002]
 - Completed 3 major pilot initiatives/studies associated with identifying and reducing EM support costs. [HQ-EM74]
 - Provided technical assistance in establishing project baselines; data collection, analysis, and management; and project integration in support of the Draft 2006 Plan. [HQ-EM74]

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Technical Programmatic Support (cont'd)

- In FY 1998:
 - Continue development of a geographic information system (GIS) and evaluating status of materials in inventory and excess facilities. [HQ-PM-001]
 - Continue providing for EM-wide information management infrastructure activities. [HQ-PM-001]
 - Continue to provide for hardware, software, maintenance and upgrades to support management information systems. [HQ-PM-001]
 - Provide technical support for EM/Office of Civilian Radioactive Waste Management (RW) activities which include the EM/RW Memorandum of Agreement and the Yucca Mountain EIS. [HQ-WM001]
 - Provide technical support to Program Integration Core Team to include evaluation and implementation of intersite integration opportunities. [HQ-WM001]
 - Provide technical support for preparation of revised DOE Order 435.1, Radioactive Waste Management, manual and guidance. [HQ-WM001]
 - Provide review and approval of Performance Assessments and Composite Analyses as required by DNFSB Recommendation 94-2 (performance assessments of low-level radioactive waste disposal). [HQ-WM001]
 - Reimburse Environmental Protection Agency for Resource Conservation and Recovery Act inspections of DOE facilities as required by FFCAct. [HQ-WM001]
 - Conduct a technical assessment of the treatment options for high-level radioactive waste stored at the Idaho National Engineering and Environmental Laboratory (INEEL) by the National Academy of Science's (NAS) Board on Radioactive Waste Management. [HQ-WM001]

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Technical Programmatic Support (cont'd)

- In FY 1998: (cont'd)
 - Provide for program management plans and procedures; management support systems; strategic planning; performance systems; cost/schedule studies. [HQ-100-AA]
 - Continue to support the Draft 2006 Plan and complete U.S. Army Corps of Engineers support activities associated with baseline reviews. [HQ-EM74]
 - Continue to support Headquarters directed nuclear material field activities to achieve cost efficiencies and increase the effectiveness of these activities for accelerating stabilization and deactivation opportunities; includes specific technical support and program integration. [HQ-6002]
- In FY 1999:
 - Improve analytical capabilities for and conduct comparative life-cycle cost analyses for EM programs and projects. Develop and begin implementing long-term environmental stewardship of DOE sites. [HQ-PM-001]
 - Provide general analytic and production support to national environmental policy development and complete development of geographic information system. [HQ-PM-001]
 - Continue providing for EM-wide information management infrastructure activities. [HQ-PM-001]
 - Continue to provide for hardware, software, maintenance and upgrades to support management information systems. [HQ-PM-001]

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Technical Programmatic Support (cont'd)

- In FY 1999: (cont'd)
 - Provide support for High-Level Waste (HLW) and Yucca Mountain Environmental Impact Statement (EIS) to include database analysis and technical analysis in support of comment response. [HQ-WM001]
 - Continue to provide support to the Program Integration Core Team to identify and evaluate integration opportunities, to implement action plans, and to effect changes to baselines. [HQ-WM001]
 - Continue to support implementation of DOE Order 435.1, Radioactive Waste Management, and conduct analyses of other major regulatory issues. [HQ-WM001]
 - Complete review and approval of Performance Assessments and Composite Analyses as required by DNFSB 94-2. [HQ-WM001]
 - Continue to reimburse Environmental Protection Agency for Resource Conservation and Recovery Act inspections of DOE facilities as required by FFCAct. [HQ-WM001]
 - Provide support in waste acceptance activities for high-level waste. [HQ-WM001]
 - Continue to provide technical support in the areas of document review, program integration, and other crosscutting activities. [HQ-100-AA]
 - Continue to provide support activities associated with the Draft 2006 Plan. [HQ-EM74]
 - Continue to support Headquarters directed nuclear material field activities to achieve cost efficiencies and increase the effectiveness of these activities for accelerating stabilization and deactivation opportunities; includes specific technical support and program integration. [HQ-6002]

Subtotal, Technical Programmatic Support

\$ 30,677 \$ 40,304 \$ 15,936

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Hazardous Waste Operations and Emergency Response (HAZWOPER)</u> [HQ-EM74]	\$ 8,000	\$ 7,500	\$ 7,500
<ul style="list-style-type: none">• In FY 1997:<ul style="list-style-type: none">- Continued HAZWOPER training at 25 DOE Nuclear Facilities and related sites which resulted in over 267,700 hours of essential training while continuing to significantly reduce training costs. Awarded responsibility for initiating a training grants program to the National Institute of Environmental Health Sciences while maintaining oversight.• In FY 1998:<ul style="list-style-type: none">- Continue training at DOE Nuclear Facilities and related sites under the HAZWOPER program.• In FY 1999:<ul style="list-style-type: none">- Continue training at DOE Nuclear Facilities and related sites under the HAZWOPER program.			
Subtotal, Hazardous Waste Operations and Emergency Response	<u>\$ 8,000</u>	<u>\$ 7,500</u>	<u>\$ 7,500</u>

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Environmental and Regulatory Analysis</u> [HQ-EM75]	\$ 733	\$ 1,491	\$ 518
<ul style="list-style-type: none">• In FY 1997:<ul style="list-style-type: none">- Completed the development of a collaborative formal decision-making process at Hanford that resulted in revising the Tri-Party Agreement milestones to achieve a cost savings of approximately \$90,000,000 to the TWRS program.- Teamed with EPA to conduct administrative reforms workshops at Savannah River (SR), Oak Ridge (OR), Idaho (ID) and Richland (RL). Developed Natural Resource Damages (NRD) Interim Policy and submit NRD report to Congress for review.- Developed and issued a draft NEPA Technical Guidance Handbook.- Continued to function as the EM NEPA Compliance Officer.• In FY 1998:<ul style="list-style-type: none">- Develop a collaborative formal decision-making program between DOE and its regulators at SR, OR, Albuquerque (AL) and Rocky Flats (RF) to identify cost efficiencies and streamline environmental cleanup.- Continue to function as the EM NEPA Compliance Officer.- Conduct NRD and Superfund policy reviews and analyses.- Support sites and program offices in negotiating the administrative provisions of cleanup and compliance agreements and Agreements-in-Principle.- Respond to proposed legislation, testimony, agency reports and Secretarial issues as required.			

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Environmental and Regulatory Analysis (cont'd)

- In FY 1999:
 - Continue to develop a collaborative formal decision-making program between DOE and its regulators at AL and RF.
 - Continue to function as the EM NEPA Compliance Officer.
 - Continue to support sites and program offices in negotiating the administrative provisions of cleanup and compliance agreements and Agreements-in-Principle.
 - Continue to respond to proposed legislation, testimony, agency reports and Secretarial issues as required.

Subtotal, Environmental and Regulatory Analysis

\$ 733 \$ 1,491 \$ 518

Transportation and Packaging: [HQ-TMHQ-1, HQ-TMAL-1A]

\$ 12,764 \$ 11,144 \$ 11,918

- In FY 1997:
 - Continued technical analyses and studies being conducted for transportation and packaging standards development and interaction with the International Atomic Energy Agency (IAEA).
 - Continued the analysis of packaging materials to improve the future packaging designs in safety performance.
 - Maintained the Explosives Classification program to ensure DOE movement of explosives are performed in a compliant manner.
 - Operated and provided maintenance and user support for decision support tools used in the performance of transportation risk analyses in support of Environmental Assessments/Environmental Impact Statements.

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Transportation and Packaging (cont'd)

- In FY 1997: (cont'd)
 - Maintained the DOE's automated transportation systems in support of efficient shipping and tracking throughout the DOE complex. These systems include the DOE tracking system, the real-time and historical shipment database, and the hazardous materials routing system.
 - Coordinated the training for transportation hazmat employees to assure compliance with 49 U.S.C. 5101.
 - Maintained forums and communications with internal and external stakeholders to identify and resolve transportation issues.
- In FY 1998, DOE will transition to the redefined DOE National Transportation Program (NTP). Activities and responsibilities include:
 - Idaho Operations Office will have responsibility for systems engineering functions associated with the NTP. This includes collecting requirements for current transportation activities, identification of new transportation and packaging needs to include analysis of complex-wide material flows, sensitivity analysis of packaging types and development and assessment for major transportation implementation options, including privatization options.
 - Albuquerque Operations Office will integrate transportation operations with all Departmental elements in establishing program requirements and priorities.
 - Headquarters will coordinate program requirements, develop DOE-wide policy, maintain interaction with regulatory agencies (Department of Transportation (DOT), Nuclear Regulatory Commission (NRC), IAEA, etc.), Congressional liaison, budget and National Environmental Policy Act (NEPA) advocacy.

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Transportation and Packaging (cont'd)

- In FY 1998: (cont'd)
 - Implement a “fleet management” approach to packaging systems and service.
 - Implement a complex-wide system to ensure notification of high visibility shipments.
 - Complete implementation of the Automated Transportation Management system at major DOE sites.
 - Continue standards development and interaction with the International Atomic Energy Agency and other regulatory bodies on issues dealing with transportation and packaging regulations.
 - Continue the analyses of potential packaging materials.
 - Continue to operate and maintain the risk analyses tools.
 - Continue coordination with internal and external stakeholders to identify and resolve DOE hazardous/radioactive materials transportation issues.
 - Continue operation of the automated systems and decision support tools.
 - Provide technical support to field and program offices and to state, tribal and local governments in preparing for and executing hazardous materials shipping campaigns.
 - Initiate negotiations with less-than-truckload (LTL) carriers to obtain a DOE-wide rate for movement of DOE materials.
 - Continue operation of the explosives classification program.
 - Continue regulatory compliance training program to ensure compliance with 49 U.S.C. 5101.
 - Ensure pre-notification of high visibility shipments to appropriate stakeholder officials.

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Transportation and Packaging (cont'd)

- In FY 1999:
 - Activities will focus on implementation of baseline transportation requirements to support the Draft 2006 Plan.
 - Continue assessment of proposed baseline changes including packaging, regulatory and waste and material flow modifications complex-wide to enhance transportation efficiencies and cost effectiveness.
 - Assure safe and cost-efficient transportation system and operations.
 - Continue activities to ensure pre-notification of high visibility shipments to appropriate stakeholder officials.
 - Provide consistent and systematic campaign planning support for programs across the complex.
 - Maintain the DOE's technical base program to establish the DOE's position on regulatory issues related to transportation and packaging.
 - Assure technological validity and consistency throughout the complex and provide national and international leadership for transport systems.
 - Provide transportation and packaging testing and materials infrastructure for the DOE.
 - Continue interaction with national and regional stakeholders
 - Continue the regulatory compliance training program.

Subtotal, Transportation and Packaging

\$ 12,764 **\$ 11,144** **\$ 11,918**

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Emergency Management</u> [HQ-EM-HQ-001]	\$ 3,484	\$ 2,591	\$ 3,218

- In FY 1997:
 - Drafted a chapter to be added to DOE Order 151.1, Comprehensive Emergency, addressing the requirements of the Transportation Emergency Preparedness Program (TEPP) within the Department.
 - Completed a final draft of the TEPP Emergency Planning Guide which implements DOE Order 151.1 for Environmental Management programs.
 - Completed the EM Headquarters Emergency Plan and developed a computer-based training program to ensure Headquarters personnel are aware of their roles and responsibilities in the event of an emergency.
 - Completed development of TEPP Regional Emergency Response plans. Six of eight regions initiated development of TEPP Regional Emergency Response plans.
 - Conducted Table Top Exercises in support of Spent Nuclear Fuel Shipments at Savannah River.
 - Developed training modules dealing with Radioactive Materials Basics for emergency responders.
 - Trained emergency responders in South Carolina in connection with spent nuclear fuel shipments.
 - Provided training courses requested by Colorado, Ohio, and South Carolina.
 - Developed a TEPP drills and exercises guidance package and the TEPP Planning Guidance package for implementation by the DOE field/operations offices in their transportation activities.

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Emergency Management (cont'd)

- In FY 1998:
 - Begin development of the DOE National Emergency Preparedness Transportation Plan.
 - Work will continue on the revision of American National Standards Institute (ANSI) National Transportation Emergency Preparedness Response Standard for radioactive material shipments and the work associated with the radioactive materials response equipment standard.
 - Begin implementation of an integrated Federal, tribal, state and local emergency response system for radioactive materials (RAM) accidents involving DOE materials.
 - Develop the National RAM Emergency Response Distance Learning Curriculum.
 - Complete the Regional-based training assistance program
 - Conduct a major transportation emergency response exercise on an east coast shipping corridor.
 - Define a TEPP drill and exercise program along DOE transportation corridors.
 - Develop a TEPP integrated regional, tribal, state and local emergency planning program.
 - Initiate planning activities for the verification program for the Facilities Emergency Preparedness Program (FEPP) and for the Headquarters drill and exercise program.
- In FY 1999:
 - Complete the DOE National Emergency Preparedness Transportation Plan.
 - Complete the ANSI standard work.
 - Complete the implementation of an integrated emergency response system for radioactive materials accidents.

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Emergency Management (cont'd)

- In FY 1999: (cont'd)
 - Begin implementation of the National Emergency Response Training for Federal, tribal, state, and local emergency responders.
 - Begin implementation of the Regional-based training assistance program.
 - Initiate the FEPP exercise program and participate in three exercises.
 - Implement EM site emergency response capability reviews.

Subtotal, Emergency Management

\$ 3,484 \$ 2,591 \$ 3,218

Analytical/Characterization Services [ID-CMP-01]

\$ 5,817 \$ 5,205 \$ 3,000

- In FY 1997:
 - Provided training and technical support to field/operations offices in utilizing the Data Quality Objectives process to effectively plan site characterization activities.
 - In collaboration with the Environmental Protection Agency (EPA), developed automated tools to evaluate costs versus benefits of additional sample collection and analysis.
 - Supported EPA and states in developing national standards for environmental laboratory accreditation.
 - Developed radiochemistry laboratory procedures in cooperation with EPA and Nuclear Regulatory Commission.
 - Addressed data quality concerns at Federal facilities raised by the EPA Office of Inspector General in cooperation with EPA.

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Analytical/Characterization Services (cont'd)

- In FY 1997: (cont'd)
 - Assessed DOE Sample Management Offices practices in response to GAO report on contracting for laboratory services.
 - Operated proficiency testing programs to assess the performance of analytical laboratories providing sample analysis services to DOE.
- In FY 1998:
 - Develop and implement a policy for Directed Planning and provide guidance on implementation of such a policy.
 - Develop and implement training in areas of DQO and SAFER; and assist the field units in directed planning activities.
 - Provide procedures manual for EML; a methods compendium; adequate validation of methods applicable within DOE complexes and establish a work group to evaluate methods development and validation needs.
 - Provide guidance on contract models; policy on DEEMS; assess DOE-EM (Environmental Quality) needs and capacity.
 - Develop and implement a tracking system for analytical resources data; and develop policies and guidance for laboratory generated wastes.
 - Participate in intra-agency workshops and task forces to assist in the deployment of technologies; and participate on various standards setting boards.
 - Establish policy and provide field guidance for Sample Management programs.

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Analytical/Characterization Services (cont'd)

- In FY 1998: (cont'd)
 - Implement a network of Sample Management organizations and schedule semi-annual Sample Management Office (SMO) workshops.
 - Develop guidance on radiological data validation.
 - Establish inter-agency and intra-agency partnerships to enhance data quality programs.
 - Develop a policy statement that requires laboratories to participate in external performance evaluation programs.
 - Implement a quality assessment program at EML.
 - Implement a mixed analyte performance evaluation at RESL; and establish a work group that evaluates the need for expansion of current and creation of new performance evaluation programs.
- In FY 1999:
 - Establish partnerships with inter-agency groups that deal with technology validation.
 - Evaluate usefulness of the monitoring information management systems.
 - Sponsor inter-agency workshops; i.e., PE workshops, etc.
 - Investigate privatization capabilities and implement, where possible.
 - Establish DOE Statistical Resource Center.

Subtotal, Analytical/Characterization Services

\$ 5,817 \$ 5,205 \$ 3,000

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Pollution Prevention</u> [OPS/HQ-PP]	\$ 23,153	\$ 20,975	\$ 12,790

- In FY 1997:
 - Achieved a cost savings of \$48,500,000 from pollution prevention projects.
 - Avoided generation of radioactive, mixed, and hazardous waste by 11,032 cubic meters.
 - Avoided generation of sanitary waste by 11,333 metric tons.
 - Sixty percent of DOE's purchases of EPA designated items contained recycled content.
 - Recycled 33% of the sanitary waste generated at DOE sites.
 - Implemented 478 pollution prevention projects.
 - Transferred the Complex-Wide Projects program to Defense Programs' Albuquerque Operations Office (program promotes transfer of the best pollution prevention practices among sites).
 - Completed Site Pollution Prevention Plans with waste reduction goals for 30 sites.
 - Implemented Pollution Prevention programs at DOE sites that contributed toward achieving the Secretarial waste reduction goals set on May 3, 1996.
 - Maintained effective Pollution Prevention programs at all DOE sites in compliance with Federal/State laws and Executive Orders.
 - Provided pollution prevention technical support at DOE sites to identify and evaluate waste reduction opportunities for waste generators and developed incentives to reduce future wastes.
 - Tracked and reported waste reductions from pollution prevention activities at DOE sites.

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Pollution Prevention (cont'd)

- In FY 1998:
 - Proposed cost savings of \$20,000,000 from completed pollution prevention projects.
 - Avoid generation of radioactive, mixed, and hazardous waste by 4,000 cubic meters.
 - Avoid generation of sanitary waste by 4,000 metric tons.
 - Recycle 33% of the sanitary waste generated across the DOE complex.
 - Implement 100 pollution prevention projects.
 - Expand the Memorandum of Agreement with the Albuquerque Operations Office to enhance the field role in transferring the best pollution prevention practices among field offices.
 - Achieve site pollution prevention waste reduction goals at Department of Energy sites to achieve the Secretarial waste reduction goals set on May 3, 1996.
 - Maintain effective site Pollution Prevention programs in compliance with Federal/State laws and Executive Orders.
 - Identify and evaluate waste reduction opportunities for waste generators, and develop incentives to reduce future wastes.
 - Track and report waste reductions from pollution prevention activities at DOE sites.
 - Track and report on DOE's purchases of EPA designated items with recycled content.
- In FY 1999:
 - Proposed savings of \$10,000,000 from completed pollution prevention projects at DOE sites.
 - Avoid generation of radioactive, mixed, and hazardous waste by 2,000 cubic meters.
 - Avoid generation of sanitary waste by 2,000 metric tons.
 - Recycle 33% of the sanitary waste generated at DOE sites.

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

FY 1997 **FY 1998** **FY 1999**

Pollution Prevention (cont'd)

- In FY 1999: (cont'd)
 - Achieve site pollution prevention waste reduction goals for 15 sites to contribute toward achieving the Secretarial waste reduction goals set on May 3, 1996.
 - Maintain effective site Pollution Prevention programs in compliance with Federal/State laws and Executive Orders.
 - Identify and evaluate waste reduction opportunities for waste generators, and develop incentives to reduce future wastes.
 - Track and report waste reductions from pollution prevention activities at DOE sites.
 - Track and report on DOE's purchases of EPA designated items with recycled content.

Subtotal, Pollution Prevention

\$ 23,153 \$ 20,975 \$ 12,790

TOTAL, HEADQUARTERS

\$ 94,666 \$ 97,010 \$ 61,580

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

III. Performance Summary - Accomplishments:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
<u>Federal Contribution to UE D&D Account</u> [HQ-9999-01]	\$376,648	\$388,000	\$398,088
<ul style="list-style-type: none">• In FY 1997:<ul style="list-style-type: none">- Provided the Federal Government's contribution to the UE D&D appropriation account. The actual workscope carried out in FY 1997 is presented in the UE D&D budget justification.• In FY 1998:<ul style="list-style-type: none">- Provide the FY 1998 Federal Government contribution.• In FY 1999:<ul style="list-style-type: none">- Provide the FY 1999 Federal Government contribution.			
TOTAL, FEDERAL CONTRIBUTION TO UE D&D ACCOUNT	<u>\$376,648</u>	<u>\$388,000</u>	<u>\$398,088</u>
TOTAL, MULTI-SITE ACTIVITIES	<u>\$471,314</u>	<u>\$485,010</u>	<u>\$459,668</u>

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

Explanation of Funding Changes From FY 1998 to FY 1999:

Intergovernmental and Public Accountability: Decrease in funding is due to completion of a charter and action plan for the National Dialogue on nuclear materials and waste. -\$1,000

Training and Education: Decrease in funding is due to completion of the Technical Qualifications Program. -\$100

Technical Programmatic Support: (\$-24,368)

Decrease in funding is due to completion of the national geographic information system (GIS) and delayed upgrades to support management information systems. -\$2,038

Reduction in EM-wide Information Management infrastructure activities. -\$755

Decrease in funding is due to reduced support needed for program and site baseline assessments which were carried out in FY 1998 and further reductions to Headquarters directed activities (e.g. complete U.S. Army Corps of Engineers support activities associated with baseline reviews). -\$19,964

Decrease in funding is due to transfer of the Radioactive Source Recovery Program to the Non-Defense Energy Research and Development Appropriations. -\$1,611

Environmental and Regulatory Analysis: Decrease in funding is due to support of other higher priority compliance activities. -\$973

Transportation and Packaging: The increase in funding is necessary to develop a fully integrated system that addresses the Department's requirements for packaging, transportation, and other associated needs to accurately predict materials (excluding weapons components) to be shipped based on programmatic material flows and transportation issues and to implement a "fleet management" approach to packaging systems and services. +\$774

POST 2006 COMPLETION - DEFENSE - MULTI-SITE ACTIVITIES (cont'd)

Explanation of Funding Changes From FY 1998 to FY 1999: (cont'd)

Emergency Management: The increase in funding is necessary to implement integrated emergency response procedures among DOE regions in the event of a transportation accident involving DOE hazardous/radioactive materials and to ensure EM sites are prepared to respond effectively to an emergency situation. +\$627

Analytical/Characterization Services: The decrease in funding is due to better contracting practices to meet changing characterization requirements. -\$2,205

Pollution Prevention: (\$-8,185)

Decrease in funding shifts the responsibility for pollution prevention activities at Albuquerque to Defense Programs. -\$2,280

Reduction in pollution prevention funding is due to implementation of one hundred pollution prevention projects in FY 1998 and reduction in amount of waste generated. -\$5,905

Federal Contribution to UE D&D Account: Increase in the Federal Contribution amount is the level required by the Energy Policy Act of 1992, adjusted for inflation. +\$10,088

Total Funding Change, Headquarters -\$25,342

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Dollars in thousands)

POST 2006 COMPLETION
CAPITAL OPERATING EXPENSES AND CONSTRUCTION SUMMARY

Capital Operating Expenses	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>\$ Change</u>	<u>% Change</u>
GPP	\$23,572	\$44,760	\$39,397	-\$5,363	-12%
AIP	0	0	0	0	0%
Capital Equipment	20,773	13,344	17,408	+4,064	+30%
Project Related Costs					
1. CDRs	584	50	0	0	0
2. "Bridge" Costs	0	835	0	0	0

Construction Project Summary

<u>Project Number</u>	<u>Project Title</u>	<u>TEC</u>	<u>Previous Approp.</u>	<u>FY 1997 Approp.</u>	<u>FY 1998 Approp.</u>	<u>FY 1999 Request</u>	<u>Unapprop Balance</u>
99-D-403	Privatization Phase I Infrastructure Support, RL	\$30,880	0	0	0	14,800	16,080
97-D-402	Tank Farm Restoration and Safe Operations, RL	232,700	0	7,584	13,961	22,723	188,432
96-D-408	Waste Management Upgrades, Various Locations ^a						
	Richland Subproject	12,800	2,100	6,129	4,400	171	0
95-D-402	Install Permanent Electrical Service, WIPP	5,942	5,014	752	176	0	0
95-D-405	Industrial Landfill V and Construction/ Demolition Landfill VII, Y-12 Plant, OR	9,600	5,600	200	3,800	0	0
95-D-407	219-S Secondary Containment Upgrade, RL	5,100	2,600	0	2,500	0	0
95-D-408	Phase II Liquid Effluent Treatment & Disposal, RL	7,500	7,100	400	0	0	0

^aSee Site/Project Completion section of Defense Environmental Restoration and Waste Management for remaining subprojects.

CAPITAL OPERATING EXPENSES AND CONSTRUCTION SUMMARY - POST 2006 COMPLETION (continued)

Construction Project Summary (Continued)

Project Number	Project Title	TEC	Previous Approp.	FY 1997 Approp.	FY 1998 Approp.	FY 1999 Request	Unapprop Balance
95-E-600	Hazardous Materials Training Center, RL	29,650	22,000	7,650	0	0	0
94-D-404	Melton Valley Storage Tank Capacity Increase, ORNL	48,000	40,436	6,345	1,219	0	0
94-D-407	Initial Tank Retrieval Systems, RL	202,000	9,980	7,600	15,100	32,860	136,360
93-D-182	Replacement of Cross-Site Transfer System, RL	47,200	39,100	8,100	0	0	0
93-D-187	High-Level Waste Removal from Filled Waste Tanks, SR	558,050	224,177	20,000	17,520	10,702	285,651
89-D-173	Tank Farm Ventilation Upgrade, RL	31,258	24,600	6,658	0	0	0
89-D-174	Replacement High-Level Waste Evaporator, SR	<u>121,604</u>	<u>105,482</u>	<u>11,500</u>	<u>4,622</u>	<u>0</u>	<u>0</u>
Subtotal, Construction Funded		n/a	\$488,189	\$82,918	\$63,298	\$81,256	n/a
<u>Operating Expense Funded</u>							
	Defense Waste Processing Facility, Saltstone Vault #2, SR	\$11,703	\$ 903	\$ 0	\$3,077	\$ 0	\$7,723
	Tank 241-C-106 Sluicing, RL	47,212	47,100	112	0	0	0
	Cap and Roof for Saltstone Vault #1, SR	<u>2,636</u>	<u>1,636</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1,000</u>
Subtotal, Operating Expense Funded		n/a	\$49,639	\$112	\$3,077	\$ 0	n/a
Total, Project Funding-Defense Post 2006 Completion		<u>n/a</u>	<u>\$540,328</u>	<u>\$83,030</u>	<u>\$66,375</u>	<u>\$81,256</u>	<u>n/a</u>

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from the FY 1998 Congressional Budget Request are denoted with a vertical line in left margin)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

POST 2006 COMPLETION

1. Title and Location of Project:		Privatization Phase I Infrastructure
Support,	2a.	Project No.: 99-D-403
	Richland, Washington	2b.
Construction Funded		

SIGNIFICANT CHANGES

- No significant changes.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from the FY 1998 Congressional Budget Request are denoted by a vertical line in the left margin.)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

POST 2006 COMPLETION

1. Title and Location of Project: Support,	2a. Richland, Washington	Privatization Phase I Infrastructure Project No.: 99-D-403 2b.
Construction Fund		

	<u>Preliminary Estimate</u>	<u>Title I Baseline</u>	<u>Current Baseline Estimates</u>
3a. Date A-E Work Initiated, (Title I Design Start Scheduled):	1st Qtr. FY 1999	n/a	1st Qtr. FY 1999
3b. A-E Work (Titles I and II) Duration:	13 Months	n/a	13 Months
4a. Date Physical Construction Starts:	1st Qtr. FY 1999	n/a	1st Qtr. FY 1999
4b. Date Construction Ends	1st Qtr. FY 2001	n/a	1st Qtr. FY 2001

	<u>Preliminary Estimate</u>	<u>Title I Baseline</u>	<u>Current Baseline Estimates</u>
5. Total Estimated Cost (TEC) --	\$30,880	n/a	\$30,880
6. Total Project Cost (TPC) --	\$39,000	n/a	\$39,000

1. Title and Location of Project: Support,	2a. Richland, Washington	Privatization Phase I Infrastructure Project No.: 99-D-403 2b.
Construction Funded		

7. Financial Schedule (Federal Funds)

<u>Fiscal Year</u>	<u>Appropriation</u>	<u>Adjustments</u>	<u>Obligations</u>	<u>Costs</u>
1999	\$ 14,800		\$ 14,800	\$ 13,680
2000	15,700		15,700	16,140
2001	380		380	1,060

8. Project Description, Justification and Scope

As part of the Tank Waste Remediation System (TWRS) Privatization Phase I Contracts (DE-AC06-96RL13308) and (DE-AC06-96RL13309), the U.S. Department of Energy committed to deliver key utilities and service to each of two privatization contractors' Low Activity Waste (LAW) treatment facilities. This project will provide the necessary site infrastructure and interface function to meet these commitments. The privatization facilities will be located near the southeast corner of the 200 East Area in an area formerly identified for LAW grout storage/disposal.

Electrical service (normal power) of up to 20mW will be provided to each privatization facility through a new 230-13.BkV substation located in the 200 East Area.

Raw water, fire suppression and potable water services will be provided to each privatization facility through the extension and upgrading of existing 200 East Area water systems.

Effluent transfer piping for non-dangerous effluents will be constructed and installed between the privatization contractors' facilities and existing liquid effluent piping systems serving the 200 East Area Treated Effluent Disposal Facility (TEDF) and the Liquid Effluent Retention Facility (LERF) along the east perimeter of the 200 East Area.

1. Title and Location of Project: Support,	2a. Richland, Washington	Privatization Phase I Infrastructure Project No.: 99-D-403 2b.
Construction Funded		

8. Project Description, Justification and Scope (cont'd)

Integrating the previously noted utilities and road access into an optimal site layout will be the role of the site development task. It will include a number of activities such as performing new roadway construction, extension of temporary power and of raw water to the construction sites and other tasks to prepare the site for eventual privatization construction activities (December 1999) and operations (June 2002). This task will also include the closure and/or replacement of selected wells on the site, rough surface contouring, habitat mitigation, establishment of a site characterization baseline and the development of selected areas for utility corridors and roadways.

The project is essential to supporting numerous Tri-Party Agreement milestones related to pretreatment and immobilization of Low Activity Tank Waste; specifically, those associated with the construction and operations of Phase I LAW facilities, M-60-11, "Start of construction of two(2) Phase I LAW facilities..." and M-60-12, "Start operation of two (2) contractor-owned...Phase I LAW facilities..."

Startup and testing activities will be completed when the liquid effluent transfer lines become operational in FY 2001. All other utilities/service upgrades will be completed in FY 2000. Final roadwork, topping, etc. will be deferred until the privatization contractors have completed their construction in FY 2002.

The FY 1999 appropriation will be used to prepare design documents and perform design/inspection and construction through either fixed-price design/construct contracts or selected design agent contracts with separate fixed-price construction contracts.

1. Title and Location of Project: Support,	2a. Richland, Washington	Privatization Phase I Infrastructure Project No.: 99-D-403 2b.
Construction Funded		

9. Details of Cost Estimate a/

	<u>Item Cost</u>	<u>Total Cost</u>
a. Design Phase		\$ 800
1. Preliminary and Final Design costs, (Design, Drawings, and Specifications)	\$ 650	
2. Design Management costs @ 23.1 percent of 9.a.1	150	
b. Construction Phase		\$ 25,420
1. Land and Land Rights	3,273	
2. Buildings & Improvements to Land	0	
3. Specialized Equipment	0	
4. Other (major utilities/comp items, specialized facilities, etc.)	16,517	
5. Removal cost less salvage	0	
6. Inspection, design and project liaison, testing, checkout and acceptance	1,400	
7. Construction Management @ 16.6 percent of 9.b	4,230	
c. Contingencies at approximately 18 percent of above costs		<u>\$ 4,660</u>
1. Design Phase	170	
2. Construction Phase	4,490	
d. Total line item cost (Section 11.a.1)		\$ 30,880
e. LESS: Non-Agency contribution (Define in Section 12)		<u>0</u>
f. Total Agency Requirement (TEC)		<u><u>\$ 30,880</u></u>

Cost estimate is based on the Conceptual Design Reports dated June 1997.

1. Title and Location of Project: Support,	2a. Richland, Washington	Privatization Phase I Infrastructure Project No.: 99-D-403 2b.
Construction Funded		

a/ Design costs for the electrical system included in construction figures. Electrical system work to be performed under a design-build contract.

1. Title and Location of Project:		Privatization Phase I Infrastructure
Support,	2a.	Project No.: 99-D-403
	Richland, Washington	2b.
Construction Funded		

10. Method of Performance

Design/inspection and construction will be accomplished using either fixed price design/construct contracts or selected design agent contracts with separate fixed price construction contracts.

1. Title and Location of Project: Support,	2a. Richland, Washington	Privatization Phase I Infrastructure Project No.: 99-D-403 2b.
Construction Funded		

11. Schedule of Project Funding and Other Related Funding Requirements

	<u>Prior Years</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Total</u>
a. Total project costs (Agency Requirements)						
1. Total facility costs						
a) Design (Section 9.a. & Section 9.c.1)	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
a) Construction (Section 9.b & Section 9.c.2) . . .	0	0	13,680	16,140	1,060	30,880
b) Plant, Engineering and Design (PE&D)	0	0	0	0	0	0
c) Operating expense funded equipment	0	0	0	0	0	0
d) Inventories	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total facility cost (Federal and Non-Federal) .	\$ 0	\$ 0	\$ 13,680	\$ 16,140	\$ 1,060	\$30,880
2. Other project costs						
a) R&D necessary to complete project	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
b) Conceptual design costs	555	0	0	0	0	555
c) Decontamination and Decommissioning (D&D) 0		0	0	0	0	0
d) NEPA documentation costs	0	0	0	0	0	0
e) Other ES&H costs	0	0	0	0	0	0
f) Other project related costs (Define in Section 12)	<u>2,525</u>	<u>2,210</u>	<u>1,020</u>	<u>1,710</u>	<u>100</u>	<u>7,565</u>
g) Total other project costs	<u>\$ 3,080</u>	<u>\$ 2,210</u>	<u>\$ 1,020</u>	<u>\$ 1,710</u>	<u>\$ 100</u>	<u>\$ 8,120</u>
Total project costs	<u>\$ 3,080</u>	<u>\$ 2,210</u>	<u>\$ 14,700</u>	<u>\$ 17,850</u>	<u>\$ 1,160</u>	<u>\$ 39,000</u>
3. LESS: Non-Agency contribution						

1. Title and Location of Project: Support,		Privatization Phase I Infrastructure Project No.: 99-D-403					
2a. Richland, Washington		2b.					
Construction Funded							
(define Federal vs non-Federal		<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Agency total project costs		<u>\$ 3,080</u>	<u>\$ 2,210</u>	<u>\$ 14,700</u>	<u>\$ 17,850</u>	<u>\$ 1,160</u>	<u>\$ 39,000</u>

1. Title and Location of Project: Support,	2a. Richland, Washington	Privatization Phase I Infrastructure Project No.: 99-D-403 2b.
Construction Funded		

11. Schedule of Project Funding and Other Related Funding Requirements (cont'd)

b. Related Lifecycle costs (estimated life of facility-50 years)	
1. Annual facility operating costs (staff, utilities, etc.)	\$ TBD
2. Annual facility maintenance/repair costs	TBD
3. Annual programmatic effort related to facility	0
4. Other Annual Costs (define in Section 12)	<u>0</u>
Total Annual related lifecycle costs	<u>\$ 0</u>

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements

- a. Total project funding
 - 1. Total facility costs
 - a) Line item--Includes design, construction, and project management costs
 - b) PE&D - None
 - c) Operating expense funded equipment--None.
 - d) Inventories--None.
 - 2. Other project costs
 - a) R&D necessary to complete construction--None.
 - b) Conceptual design--Expense funds of \$555,000 have been used to date for conceptual design.
 - c) Decontamination and Decommissioning (D&D)--None.
 - d) NEPA documentation--None.
 - e) Other project related costs--\$7,565,000 Included is the cost of project support, engineering studies, Design Requirement Document; Interface Control Documents and Drawings integration with the IPT and WIT, site characterization studies, maintenance and revision of the TWRS System Engineering FRDB, soil sampling, well

1. Title and Location of Project: Support,	2a. Richland, Washington	Privatization Phase I Infrastructure Project No.: 99-D-403 2b.
Construction Funded		

monitoring and decommissioning, start-up support as required, BPA support for 23kV system analysis, telecommunications support, startup and operation support as required as well as radiation monitoring and other project specific activities.

1. Title and Location of Project: Support,	2a. Richland, Washington	Privatization Phase I Infrastructure Project No.: 99-D-403 2b.
Construction Funded		

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements (cont'd)

b. Related annual costs

1. Facility operating costs--TBD
2. Facility maintenance and repair costs--TBD
3. Programmatic operating expenses directly related to the facility--This project supports the overall permanent waste disposal mission at Hanford. No direct changes to this mission will occur as a result of this project.
4. Capital equipment requirements for programmatic support--
5. GPP or other construction related to programmatic effort--None.
6. Utility costs--None.
7. Other costs--None.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from FY 1998 Congressional Budget Request are denoted with a vertical line in left margin)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

POST 2006 COMPLETION

1. Title and Location of Project:		Tank Farm Restoration and Safe
Operations,	2a.	Project No.: 97-D-402
	Richland, Washington	2b.
Construction Funded		

SIGNIFICANT CHANGES

- Reflects the funding change to accelerate completion of upgrades to support the waste disposal privatization schedule. This acceleration is necessary to ensure waste feed to the private vendor(s) will be available when required.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from FY 1998 Congressional Budget Request are denoted with a vertical line in left margin)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

POST 2006 COMPLETION

1. Title and Location of Project: Operations,		2a. Richland, Washington	Tank Farm Restoration and Safe Project No.: 97-D-402 2b.	
Construction Funded				
		<u>Preliminary Schedule</u>	<u>Title I Baseline</u>	<u>Current Baseline Schedule</u>
3a.	Date A-E Work Initiated, (Title I Design Start Scheduled):	2nd Qtr. FY 1997	n/a	2nd Qtr. FY 1997
3b.	A-E Work (Titles I & II) Duration:	94 Months	n/a	94 Months
4a.	Date Physical Construction Starts:	3rd Qtr. FY 1998	n/a	1st Qtr. FY 1998
4b.	Date Construction Ends:	3rd Qtr. FY 2007	n/a	3rd Qtr. FY 2007
		<u>Preliminary Estimate</u>	<u>Title I Baseline</u>	<u>Current Baseline Estimate</u>
5.	Total Estimated Cost (TEC) --	\$206,000 <u>a/</u>	n/a	\$232,700 <u>b/</u>
6.	Total Project Cost (TPC) --	\$273,000 <u>a/</u>	n/a	\$301,500 <u>b/</u>

- a/ Preliminary cost estimate based on November 1996 Conceptual Design Report.
- b/ Current baseline estimate based on revised Conceptual Design Report estimate from July 1997. This supports the revised schedule for timely delivery of feed to private vendor(s).

1. Title and Location of Project:		Tank Farm Restoration and Safe
Operations,	2a.	Project No.: 97-D-402
	Richland, Washington	2b.
Construction Funded		

7. Financial Schedule (Federal Funds):

<u>Fiscal Year</u>	<u>Appropriation</u>	<u>Adjustments</u>	<u>Obligations</u>	<u>Costs</u>
1997	\$ 7,584		\$ 7,584	\$ 3,864
1998	13,961		13,961	13,120
1999	22,723		22,723	23,686
2000	9,673		9,673	7,712
2001	23,568		23,568	17,105
2002	33,929		33,929	33,192
2003	42,214		42,214	39,084
2004	35,904		35,904	36,000
2005	19,002		19,002	23,195
2006	17,342		17,342	19,627
2007	6,800		6,800	16,115

1. Title and Location of Project: Operations,	2a. Richland, Washington	Tank Farm Restoration and Safe Project No.: 97-D-402 2b.
Construction Funded		

8. Project Description, Justification and Scope

The Tank Farm Restoration and Safe Operations Major System Acquisition (MSA) will provide upgrades for selected tank farm instrumentation control, tank ventilation, waste transfer, and electrical systems in order to restore these systems to an acceptable design basis. Phase I of the project focuses primarily on improvements needed to support waste disposal privatization and routine operations of existing double-shell tank (DST) farm facilities (i.e., “Manage Tank Waste”) during the Tank Waste Remediation System (TWRS) mission, but also support initiatives related to single-shell tank (SST) stabilization. This project is integrated with other planned/ongoing upgrades, waste retrieval, and major maintenance activities to ensure that the combined upgrades are performed in a cost-effective manner and that they will adequately support the overall TWRS mission.

The Tank Farm Restoration and Safe Operations MSA will provide major upgrades to Hanford's existing Tank Farm facilities in the following areas:

- Instrumentation

Existing primary tank monitoring instrumentation in the DST farms will be modified and upgraded for level, temperature, and vapor pressure measurement. The DST waste transfer system will be upgraded for routine verification and waste transfer verification. The leak detection system associated with the annulus, leak detection pit, and process/support pits in these tank farms will be upgraded. The master pump shutdown system and associated alarms will also be upgraded. All new instrumentation/control equipment will be capable of providing remote readout and/or alarm at selected manned facilities, resulting in a significant reduction in the amount of manual field data collection in the DST farms, thereby improving worker efficiency and reducing worker stay time in the radiation zones (implementing an as low as reasonably achievable {ALARA} principle). No new SST instrumentation is planned to be provided by this project.

1. Title and Location of Project: Operations,	2a. Richland, Washington	Tank Farm Restoration and Safe Project No.: 97-D-402 2b.
Construction Funded		

8. Project Description, Justification and Scope (cont'd)

- Tank Ventilation

The project will replace the existing primary ventilation systems for Tank Farms 241-AN, -AP, and -AW with new, high-capacity exhaust filtration systems. A new exhaust stack, along with stack effluent monitoring and ventilation control equipment, will be included in these upgrades. New seal pots and associated condensate piping will be installed to support the collection of condensate from the new ventilation systems and return it to the primary tank system. The ventilation systems will be designed to facilitate future installation of additional effluent control equipment, if needed. The project also will provide a new annulus ventilation system for the 241-SY Tank Farm, and replacement ventilation systems for the 244-A and 244-S Double Contained Receiver Tank (DCRT) facilities. The new annulus and primary ventilation systems will be connected to existing underground ductwork. Existing filter trains replaced by this project will be removed and disposed.

The ventilation upgrades will improve worker safety and reduce the risk of radioactive and/or hazardous material releases to the environment by providing improved confinement and monitoring of tank emissions. New offgas treatment/filtration systems and effluent monitoring systems will be provided to ensure compliance with applicable Federal, State, and local emission standards.

- Waste Transfer

New valve manifold assemblies will be provided in selected pits used for DST waste transfer operations. In addition, the project will install three new transfer routes (pipe-in-pipe configuration, equipped with appropriate leak detection and cathodic protection capabilities) in the "A Farm Complex" (200 East Area), and three existing transfer lines will be replaced with new lines. Existing pits used for DST waste transfer operations will have special protective coating applied to the walls, floor, and underside of cover blocks to provide a decontaminable surface and support compliance with regulatory requirements for secondary containment. New transfer systems will be fully compliant with Resource Conservation and Recovery Act (RCRA) requirements and with Washington State regulations governing hazardous waste handling.

1. Title and Location of Project: Operations,	2a. Richland, Washington	Tank Farm Restoration and Safe Project No.: 97-D-402
Construction Funded	2b.	

8. Project Description, Justification and Scope (cont'd)

- Electrical Distribution

Existing electrical power supplies for the equipment supporting DST primary/annulus ventilation systems and the 244-A/244-S DCRT ventilation systems will be upgraded and/or replaced to provide backup power capabilities. In addition to providing improved reliability for ventilation systems, these upgrades will allow shutdown of the main switchgear to permit routine preventative maintenance to be performed. In addition, the project will upgrade SST electrical power systems to support clean/controlled/stable operations. No new safety class power systems are planned as part of this project.

The purpose of Phase II of this project is to improve reliability of safety-related systems, reduce on-site health and safety hazards, reduce the risk of unmonitored releases to the environment, support waste disposal privatization and support DST “Manage Tank Waste” functions by restoring the selected Tank Farm facilities and systems. Assessments of the Tank Farms’ instrumentation/control, ventilation, waste transfer, and electrical systems, which included physical inspections/condition assessments and engineering analyses to determine compliance with applicable requirements, have identified the need for extensive infrastructure restoration in order to meet the overall TWRS mission goals and support safe operation and maintenance activities.

Because of their age, many infrastructure systems and components have either exceeded their useful service lives and can be expected to fail in the near-term; have deteriorated beyond repair and must be replaced to ensure continued reliable operation; or operate outside current environmental, health, and safety regulations. Due to the age and obsolescence of the existing equipment, it is often difficult to obtain replacement parts for failed or degraded components. These conditions, coupled with the problems associated with performing maintenance work in contaminated areas, have resulted in high operation and maintenance costs for the Tank Farm facilities.

1. Title and Location of Project:		Tank Farm Restoration and Safe
Operations,	2a.	Project No.: 97-D-402
	Richland, Washington	2b.
Construction Funded		

8. Project Description, Justification and Scope (cont'd)

The FY 1997 activities included: definitive designs for the master pump shutdown system, the AN farm valve pit upgrades, and the 200 E/W valve pit upgrades. The FY 1998 activities include: continued definitive design activities, and start of construction of the AN farm valve pit upgrades, the 200 E/W valve pit upgrade, the AY farm upgrade, and the AZ farm valve pit upgrade. The FY 1999 appropriation will be used to support continued Phase I definitive design, procurement and construction activities as well as associated Safety Analysis development, permitting, and project management activities, including start of construction of the AW Farm valve pit upgrade and the master pump upgrades.

1. Title and Location of Project: Operations,	2a. Richland, Washington	Tank Farm Restoration and Safe Project No.: 97-D-402 2b.
Construction Funded		

9. Details of Cost Estimate

	<u>Item Cost</u>	<u>Total Cost</u>
a. Design Phase		\$ 48,640
1. Preliminary and Final Design costs, (Design, Drawings, and Specifications)	\$ 39,545	
2. Design Management costs @ 22.9 percent of 9.a.1	9,095	
b. Construction Phase		142,150
1. Land and Land Rights	0	
2. Buildings and Improvements to Land	130	
3. Specialized Equipment	88,120	
4. Other (major utilities/comp items, specialized facilities, etc.)	4,510	
5. Removal cost less salvage	4,510	
6. Inspection, design, and project liaison, testing, checkout, and acceptance	21,590	
7. Construction Management	13,800	
8. Project management @ 6.7 percent of 9.b	9,490	
c. Contingencies at approximately 22 percent of above costs		<u>41,910</u>
1. Design Phase	7,900	
2. Construction Phase	34,010	
d. Total Line-item costs (Section 11.a.1.)		\$232,700
e. LESS: Non-Agency contribution (Define in Section 12)		<u>0</u>
f. Total Agency Requirements (TEC)		<u><u>\$232,700</u></u>

1. Title and Location of Project: Operations,	2a. Richland, Washington	Tank Farm Restoration and Safe Project No.: 97-D-402 2b.
Construction Funded		

10. Method of Performance

The Project Hanford Management Contractor (PHMC) will be responsible for overall project management and integration services for the Tank Farm Restoration and Safe Operations project, as well as for coordination of permitting and safety analysis work in support of the project. Definitive design, inspection, and construction management activities will be performed by the contracted Engineer/Constructor (E/C) Contractor. Construction work in radiologically contaminated areas, utility tie-ins, and demolition work will also be performed by the E/C. To the extent feasible, construction in uncontaminated areas and procurement shall be accomplished by fixed-price contracts awarded on the basis of competitive bidding. Burial of contaminated materials, health physics technician support, and startup testing/readiness review support will be performed by the PHMC.

1. Title and Location of Project: Operations,	2a. Richland, Washington	Tank Farm Restoration and Safe Project No.: 97-D-402 2b.
Construction Funded		

11. Schedule of Project Funding and Other Related Funding Requirements

	<u>Prior Years</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>Outyears</u>	<u>Total</u>
a. Total project costs (Agency Requirements)						
1. Total facility costs and construction						
a) Design (Section 9.a & Section 9.c.1)	\$ 0	\$ 3,864	\$ 13,120	\$ 23,686	\$192,030	\$232,700
b) Construction (Section 9.b & Section 9.c.2) . . .	0	0	0	0	0	0
c) Plant, Engineering, and Design (PE&D)	0	0	0	0	0	0
d) Operating expense funded equipment	0	0	0	0	0	0
e) Inventories	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total facility costs (Federal and Non-Federal) .	\$ 0	\$ 3,864	\$ 13,120	\$ 23,686	\$192,030	\$232,700
2. Other project costs						
a) R&D necessary to complete project	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
b) Conceptual design costs	11,815	1,509	0	0	1,513	14,837
c) Decontamination & Decommissioning (D&D)	0	0	0	0	0	0
d) NEPA documentation costs	12	0	0	0	0	12
e) Other ES&H costs	0	0	0	0	0	0
f) Other project related costs (Define in Sec.12) .	<u>10,636</u>	<u>1,170</u>	<u>2,308</u>	<u>3,277</u>	<u>36,560</u>	<u>53,951</u>
g) Total other project costs	<u>\$22,463</u>	<u>\$ 2,679</u>	<u>\$ 2,308</u>	<u>\$ 3,277</u>	<u>\$ 38,073</u>	<u>\$ 68,800</u>
Total project costs	<u>\$22,463</u>	<u>\$ 6,543</u>	<u>\$15,428</u>	<u>\$26,963</u>	<u>\$230,103</u>	<u>\$301,500</u>
3. LESS: Non-Agency contribution (define Federal vs non-Federal)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Agency total project costs (TPC)	<u>\$22,463</u>	<u>\$6,543</u>	<u>\$15,428</u>	<u>\$26,963</u>	<u>\$230,103</u>	<u>\$301,500</u>

1. Title and Location of Project: Operations,	2a. Richland, Washington	Tank Farm Restoration and Safe Project No.: 97-D-402 2b.
Construction Funded		

11. Schedule of Project Funding and Other Related Funding Requirements (cont'd)

b. Related Lifecycle costs (estimated life of project--30 years)	
1. Annual facility operating costs (staff, utilities, etc.)	\$ n/a
2. Annual facility maintenance/repair costs	n/a
3. Annual programmatic effort related to facility	0
4. Other Annual costs (define in Section 12)	<u>0</u>
Total Annual related lifecycle costs	<u>\$ n/a</u>

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements

- a. Total project funding
 - 1. Total facility costs
 - a) Line-item -- These funds will be used for engineering, design, and inspection (ED&I); procurement/construction safety analysis development; permitting and project management.
 - b) PE&D -- None
 - c) Operating expense funded equipment -- None
 - d) Inventories -- None

1. Title and Location of Project: Operations,	2a. Richland, Washington	Tank Farm Restoration and Safe Project No.: 97-D-402 2b.
Construction Funded		

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements (cont'd)

2. Other project costs

- a) R&D necessary to complete construction -- None.
- b) Conceptual design -- \$14,837,000 including Systems Engineering (SE) development of functions, requirements, architectural alternatives, test planning, and interfaces; also includes pre-Title I design studies.
- c) Decontamination & Decommissioning (D&D) -- None
- d) NEPA documentation -- \$12,000 spent on initial NEPA activities. The project is covered by the Tank Waste Remediation System EIS.
- e) Other ES&H Costs - None.
- f) Other project related costs -- \$53,951,000 for project definition, program integration, and support, design and construction support, preliminary safety documentation preparation, regulatory permitting plans, site characterization, and startup testing/readiness reviews.

b. Related annual costs

- 1. Facility operating costs -- TBD
- 2. Facility maintenance and repair costs -- TBD
- 3. Programmatic operating expenses directly related to the facility -- None
- 4. Capital equipment requirements for programmatic support -- None
- 5. GPP or other construction related to programmatic efforts -- None
- 6. Utility costs -- None
- 7. Other costs -- None

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from FY 1998 Congressional Budget Request are denoted with a vertical line in left margin.)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

POST 2006 COMPLETION

1. Title and Location of Project: Project No.: 96-D-408		Waste Management Upgrades,		2a.
	Various Locations		2b.	Construction
Funded				

SIGNIFICANT CHANGES

- Increase to total estimated cost (TEC) on Subproject #2 reflects an accelerated two-year construction duration to limit cost growth and plant outages.

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

1.	Title and Location of Project:	Waste Management Upgrades, <u>a/</u>
2a.	Project No.: 96-D-408	
	Various Locations	2b.
Funded		Construction

	<u>Preliminary Estimate</u>	<u>Title I Baseline</u>	<u>Current Baseline Estimate</u>
5. Total Estimated Cost (TEC) --	\$26,470	\$26,470	\$28,744
6. Total Project Cost (TPC) --	\$33,629	\$33,629	\$35,903

a/ The Site/Project Completion section of the Defense Environmental Restoration and Waste Management also provides funds for this project.

1. Title and Location of Project:	Waste Management Upgrades,	2a.
Project No.: 96-D-408		
Various Locations	2b.	Construction
Funded		

7. Financial Schedule (Federal Funds)

<u>Fiscal Year</u>	<u>Appropriation</u>	<u>Adjustments</u>	<u>Obligations</u>	<u>Costs</u>
1996	\$ 5,615	\$(3,100) a/	\$ 2,515	\$ 2,256
1997	11,246	2,100 b/	13,346	8,792
1998	8,200	0	8,200	8,200
1999	4,683	0	4,683	9,496

8. Project Description, Justification and Scope

This project line-item is the result of the FY 1996 Appropriation, in which Congress has provided greater flexibility to manage multiple projects of similar nature at various location. The subprojects will be addressed individually in the construction project data sheet, and must undergo the same review process as any other construction line item proposed in this budget. Since these changes occur on a real-time basis and cannot be anticipated, this consolidated line item approach will provide DOE the flexibility to react to significant technical, programmatic and regulatory changes that impact the individual subprojects, making the most effective use of the funds available.

a. Subproject #01 - Replace Industrial Waste Piping, Kansas City Plant

<u>TEC</u>	<u>PREV.</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>OUTYEAR</u>	<u>CONSTRUCTION START - COMPLETION DATE</u>
\$2,400	\$ 200	\$ 2,200	\$ 0	\$ 0	\$ 0	4th Qtr. FY 1997 3rd Qtr. FY 1998

a/ Use of uncosted prior year balances to offset FY 1997 appropriation.

1. Title and Location of Project: Project No.: 96-D-408	Waste Management Upgrades, 2a.
Various Locations Funded	2b. Construction

b/ Reflects internal reprogramming.

1. Title and Location of Project:	Waste Management Upgrades,	2a.
Project No.: 96-D-408		
Various Locations	2b.	Construction
Funded		

8. Project Description, Justification and Scope (cont'd)

This project will replace the overhead industrial waste piping system at the Kansas City Plant (KCP) including dilute acid, caustic, cyanide chrome, and industrial waste lines from the main manufacturing building and five other small buildings to the Industrial Waste Pretreatment Facility (IWPF). The project includes phased demolition and construction to replace the nine separate overhead industrial waste system pipe lines which together convey virtually all process wastes from the operating buildings to the IWPF. All of the pipe lines are located on an outdoor overhead pipe bridge. The new piping will be installed in the same location as the existing piping. Minor modification will be made to the existing bridge to strengthen the pipe anchor points to accommodate thermally induced loads. The total length of piping is approximately 6,700 feet.

In FY 1998 prior year carry-over funds will be used for project management activities and to complete construction.

b. Subproject #02 - T-Plant Secondary Containment and Leak Detection Upgrades, Richland

<u>TEC</u>	<u>PREV.</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>OUTYEAR</u>	<u>CONSTRUCTION START - COMPLETION DATE</u>
\$12,800	\$ 2,100	\$ 6,129	\$ 4,400	\$ 171	\$ 0	1st Qtr. FY 1997 - 1st Qtr. FY 1999

The T-Plant is the primary decontamination facility for the Hanford Site. The decontamination activities support Hanford Site environmental restoration activities and waste management programs. This project will modify T-Plant facilities to comply with the State of Washington and Federal environmental regulations for secondary containment and leak detection.

This project will provide a functional on-line facility to support major decontamination activities as required by the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) milestone M-32-03, "Complete T-Plant Tank Actions."

The upgrades provided by this project are installation of a liquid waste collection, containment, leak detection, and transfer system for handling decontamination solutions in the 2706-T and 2706-TA facility.

1. Title and Location of Project:	Waste Management Upgrades,	2a.
Project No.: 96-D-408		
Various Locations	2b.	Construction
Funded		

8. Project Description, Justification and Scope (cont'd)

The FY 1997 adjustment to baseline is to account for site allocation changes for property, equipment, and management. The FY 1998 appropriation will be used for construction and project management support.

c. Subproject #03 - Tank Farm Services Upgrades, Savannah River

<u>TEC</u>	<u>PREV.</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>OUTYEAR</u>	<u>CONSTRUCTION START - COMPLETION DATE</u>
\$13,544	\$ 215	\$ 5,017	\$ 3,800	\$4,512	\$ 0	4th Qtr. FY 1996 - 4th Qtr. FY 1999

The Tank Farm Services Upgrade project consists of improvements to three different areas of the Tank Farm. These improvements will include service piping upgrades in the H-Area Tank Farm (West Hill), Electrical upgrades in the F-Area Tank Farm, and a cooling systems upgrade in the H-Area Tank Farm (East Hill). The upgrades to the service piping are necessary to support the continued and expanding tank farm operations. The cost of repairing leaks in buried pipes has been approximately \$4 million over the past four years. Detecting and repairing the leaks is very difficult.

The electrical upgrades in F-Area will consist of the addition or replacement of automatic transfer switches (ATS) and cable which will correct the electrical low voltage situation in the F-Area Tank Farm eight. Low voltage situations are causing power interruptions in the F-Area Tank Farm. This project will provide and install a new automatic transfer switch in 241-64F compressor house. The project will replace the overloaded automatic transfer switch in Building 241-74F. The existing normal power supply and load cables in Building 241-74F will be replaced. The standby source and cables will not be changed.

1. Title and Location of Project: Project No.: 96-D-408	Waste Management Upgrades,	2a.
Various Locations	2b.	Construction
Funded		

8. Project Description, Justification and Scope (cont'd)

The cooling system upgrade will provide adequate cooling to support In-Tank Precipitation (ITP) and Extended Sludge Processing (ESP), which will feed Saltstone and Defense Waste Processing Facility (DWPF). Due to changes in the site mission, the cooling requirements for the Tank Farm have changed. The new mission is to remove waste, which will generate heat from slurry pump operation and tank transfers. The process facilities will require lower tank temperatures. To provide adequate cooling, a heat exchanger and a new chromate cooling water pump will be added to the system. The existing cooling pumps will be upgraded. An upgraded outdoor diesel generator may be provided as a stand-by power source and replace the existing 500 KW diesel generator. This project will prevent additional underground piping leaks in contaminated soil, which disrupt operations and expose personnel to radiation. These leaks are difficult to locate and costly to repair. The F-Area low voltage situations would continue to cause service disruptions and unplanned outages. The existing East Hill system will not meet the waste removal processes cooling requirements for the current site mission. Operation of new facilities such as In-Tank Precipitations (ITP) and Extended Sludge Processing (ESP) would be administratively controlled (i.e., operate only when air temperature is sufficiently low, during winter months or at night). Operation of Saltstone and Defense Waste Processing Facility could experience limitations.

*

* The mechanical services in the H-Area Tank Farm need to be replaced due to damage to the service caused by age. These upgrades are required to support the tank farm operations. This project will replace buried service piping in H-Area with piping in trenches or on pipe racks and provide three new gang valve assemblies with double contained steam supply. The new gang valve assemblies with double contained pipe to Tanks 35 through 37 will reduce the possibilities of back flow in the steam supply lines from occurring again. The assemblies will give better environmental control and implement the ALARA philosophy. The existing lines will be capped and abandoned in place. The gang valve house will be abandoned. The existing gang valve house (GVH) and steam transfer line are not in compliance with DOE Order 5820.2A "Radioactive Waste management", and pose a threat to the environment and personnel. The majority of replacement piping provided by this project will be routed around the perimeter of the tank farm on pipe racks or in trenches provided by other projects. Service piping will be extended routed from the perimeter "header" systems to tanks tops (Tanks 29-32 and 35-37) diversion boxes (HDB4 and HDB6) and gang valve houses (Tanks 35-37) using pipe supports provided by this project. Currently tanks 35-37

1. Title and Location of Project: Project No.: 96-D-408	Waste Management Upgrades, 2a.
Various Locations Funded	2b. Construction

are serviced by gang valves located in a common location building 241-H. Back flow from Tank 37 has contaminated the steam supply line (Tank 37) connecting the gang

1. Title and Location of Project: Project No.: 96-D-408	Waste Management Upgrades,	2a.
Various Locations	2b.	Construction
Funded		

8. Project Description, Justification and Scope (cont'd)

valves to the tank transfer jets. These steam supply lines are the only lines for Type III waste tanks that do not have secondary containment. The upgrade of the new GVHs and associated piping will include replacement of the steam lines including secondary containment provisions between the GVHs and the tanks.

The FY 1999 funds will be used to finish construction on the gang valve house scope, design and initiate construction on the cooling scope and design and initiate construction of the F-area electrical scope. The gross annual operating expense for this facility is estimated to be \$150,000.

1. Title and Location of Project:	Waste Management Upgrades,	2a.
Project No.: 96-D-408		
Various Locations	2b.	Construction
Funded		

9. Details of Cost Estimate a/ b/

	<u>Item Cost</u>	<u>Total Cost</u>
a. Design Phase		\$ 6,130
1. Preliminary and Final Design costs, ((Design, Drawings, and Specifications)	\$ 4,400	
2. Design Management costs @ 39.3 percent of 9.a.1	1,730	
b. Construction Phase		17,090
1. Land and Land Rights	0	
2. Buildings and Improvements to Land	2,100	
3. Specialized Equipment	0	
4. Other (major utilities/comp items, specialized facilities, etc.)	5,610	
5. Removal cost less salvage	8,610	
6. Inspection, design, and project liaison, testing, checkout, and acceptance	0	
7. Construction Management @ 4.5 percent of 9.b	770	
c. Contingencies at approximately 24 percent of above costs		<u>5,524</u>
1. Design Phase	1,586	
2. Construction Phase	3,938	
d. Total line-item cost (section 11.a.1.)		<u>\$ 28,744</u>
e. LESS: Non-Agency contribution (Define in Section 12)		<u>0</u>
f. Total Agency Requirement (TEC)		<u>\$ 28,744</u>

a/ Subproject 2 portion of this estimate is based on the final revised two year construction estimate dated May 27, 1997.

1. Title and Location of Project: Project No.: 96-D-408	Waste Management Upgrades, 2a.
Various Locations Funded	2b. Construction

b/ Escalation rates were calculated from the January 1997 update of the economic escalation price change indices for DOE construction projects as published by the "Office of Infrastructure Acquisition, FM-50."

1. Title and Location of Project:	Waste Management Upgrades,	2a.
Project No.: 96-D-408		
Various Locations	2b.	Construction
Funded		

10. Method of Performance

Design, inspection, procurement, and construction shall be performed under a negotiated contract with the offsite engineer-constructor contractor. The operating contractor will support the project by providing input to design revisions as well as overall project management through the duration of the project.

1. Title and Location of Project:	Waste Management Upgrades,	2a.
Project No.: 96-D-408		
Various Locations	2b.	Construction
Funded		

11. Schedule of Project Funding and Other Related Funding Requirements

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	Total
a. Total project costs (Agency Requirements)						
1. Total facility costs						
a) Design (Section 9.a & Section 9.c.1)	\$ 1,033	\$ 2,705	\$ 2,165	\$ 227	\$ 0	\$ 6,130
b) Construction (Section 9.b & Section 9.c.2) . . .	1,223	6,087	6,035	9,269	0	22,614
c) Plant, Engineering, and Design (PE&D)	0	0	0	0	0	0
d) Operating expense funding equipment	0	0	0	0	0	0
e) Inventories	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total facility costs (Federal and Non-Federal) .	\$ 2,256	\$8,792	\$ 8,200	\$ 9,496	\$ 0	\$28,744
2. Other project costs						
a) R&D necessary to complete project	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
b) Conceptual design costs	1,666	274	0	0	0	1,940
c) Decontamination & Decommissioning (D&D)	0	0	0	0	0	0
d) NEPA documentation costs	5	0	0	0	0	5
e) Other ES&H costs	0	0	0	0	0	0
f) Other project related costs (Define in Sec. 12) .	<u>526</u>	<u>124</u>	<u>863</u>	<u>1,096</u>	<u>2,605</u>	<u>5,214</u>
g) Total other project costs	<u>\$ 2,197</u>	<u>\$ 398</u>	<u>\$ 863</u>	<u>\$ 1,096</u>	<u>\$ 2,605</u>	<u>\$ 7,159</u>
Total project cost (TPC)	<u>\$ 4,453</u>	<u>\$9,190</u>	<u>\$ 9,063</u>	<u>\$10,592</u>	<u>\$ 2,605</u>	<u>\$35,903</u>
3. LESS: Non-Agency contribution (define Federal vs non-Federal)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Agency total project costs (TPC)	<u>\$ 4,453</u>	<u>\$9,190</u>	<u>\$ 9,063</u>	<u>\$10,592</u>	<u>\$ 2,605</u>	<u>\$35,903</u>

1. Title and Location of Project:	Waste Management Upgrades,	2a.
Project No.: 96-D-408		
Various Locations	2b.	Construction
Funded		

11. Schedule of Project Funding and Other Related Funding Requirements (cont'd)

b. Related Life cycle costs (estimated life of project-- 20-30 years for all subprojects)	
1. Annual facility operating costs (staff, utilities, etc.)	\$ 3,992
2. Annual facility maintenance/repair costs	1,859
3. Annual programmatic effort related to facility	3,426
4. Other Annual costs (define in Section 12)	<u>500</u>
Total Annual related Life cycle costs	<u>\$ 9,777</u>

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements

- a. Total project funding
 1. Total facility costs
 - a) Line-Item -- Total cost of construction is \$28,744,000; these funds will be used for design, procurement, construction, and project management.
 - b) Plant engineering & design -- No narrative required.
 - c) Operating expense funded equipment -- No narrative required.
 - d) Inventories -- No narrative required.
 2. Other project costs
 - a) R&D necessary to complete construction -- No narrative required.
 - b) Conceptual design -- Will be completed at an approximate cost of \$1,940,000.
 - c) Decontamination & Decommissioning (D&D) -- No narrative required.
 - d) NEPA documentation -- National Environmental Policy Act (NEPA) activities and documentation are expected to cost approximately \$5,000 for Richland.

1. Title and Location of Project:	Waste Management Upgrades, 2a.
Project No.: 96-D-408	
Various Locations	2b. Construction
Funded	

- e) Other project related costs -- Costs of approximately \$5,214,000 for various project support activities, including value engineering session, site evaluation, project and quality assurance plans, design and quality assurance reviews, inventories for startup, readiness reviews, and health physics technician and plant personnel report.

1. Title and Location of Project:	Waste Management Upgrades,	2a.
Project No.: 96-D-408		
Various Locations	2b.	Construction
Funded		

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements (cont'd)

b. Related annual costs

1. Facility operating costs -- Costs of approximately \$3,992,000 for operations, maintenance, and utilities for the facilities provided by the Subprojects.
2. Facility maintenance and repair costs -- \$1,859,000; assumes a share of the total maintenance outlay.
3. Programmatic operating expenses directly related to the facility -- Includes T-Plant waste management, operational safety, facility operations, engineering procedures/drawings, waste assessments and rail car transfers; \$3,426,000.
4. Capital equipment requirements for programmatic support -- costs of \$400,000.
5. GPP or other construction related to programmatic effort -- Costs of \$100,000.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from FY 1998 Congressional Budget Request are denoted with a vertical line in left margin.)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

POST 2006 COMPLETION

1. Title and Location of Project:	Initial Tank Retrieval Systems,	2a. Project No.: 94-D-407
	Richland, Washington	2b.
Funded		Construction

SIGNIFICANT CHANGES

- None

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from FY 1998 Congressional Budget Request are denoted with a vertical line in left margin.)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

POST 2006 COMPLETION

1. Title and Location of Project: Initial Tank Retrieval Systems, Richland, Washington		2a. Project No.: 94-D-407 2b. Construction	
Funded			
	<u>Preliminary Schedule</u>	<u>Title I Baseline</u>	<u>Current Baseline Schedule</u>
3a. Date A-E Work Initiated, (Title I Design Start Scheduled):	4th Qtr. FY 1994	4th Qtr. FY 1994	4th Qtr. FY 1994
3b. A-E Work (Titles I & II) Duration:	123 Months	123 Months	84 Months
4a. Date Physical Construction Starts:	2nd Qtr. FY 1997	2nd Qtr. FY 1997	1st Qtr. FY 1999
4b. Date Construction Ends:	3rd Qtr. FY 2008	3rd Qtr. FY 2008	2nd Qtr. FY 2005
	<u>Preliminary Estimate</u>	<u>Title I Baseline</u>	<u>Current Baseline Estimate</u>
5. Total Estimated Cost (TEC) --	\$315,100	\$202,000	\$202,000
6. Total Project Cost (TPC) --	\$375,200	\$229,100	\$229,100

1. Title and Location of Project:	Initial Tank Retrieval Systems, Richland, Washington	2a. Project No.: 94-D-407
Funded		2b. Construction

7. Financial schedule (Federal Funds)

<u>Fiscal Year</u>	<u>Appropriations</u>	<u>Adjustments</u>	<u>Obligations</u>	<u>Costs</u>
1994	\$ 7,000	-6,000 <u>a/</u>	\$ 1,000	\$ 509
1995	17,700	-14,320 <u>b/</u>	3,380	3,151
1996	12,000	-6,400 <u>c/</u>	5,600	2,659
1997	12,600	-5,000 <u>d/</u>	7,600	6,231
1998	15,100		15,100	15,200
1999	32,860		32,860	32,860
2000	41,730		41,730	41,730
2001	35,580		35,580	35,580
2002	30,620		30,620	30,620
2003	13,960		13,960	13,960
2004	14,570		14,570	13,930
2005	0		0	5,570

a/ Reflects use of \$6,000,000 of prior year funds for uncoded offset.

b/ Reduction of \$9,020,000 of FY 1995 funds for Productivity Savings, reduction of \$5,300,000 current year funds due to defense rescission.

b/ Reduction of \$6,400,000 to meet uncoded offset for FY 1996.

c/ Reflects \$5,000,000 internal reprogramming by the Richland Operations Office. The reprogramming moved \$5,000,000 to Project 89-D-173, Tank Farm Ventilation Upgrades.

1. Title and Location of Project:	Initial Tank Retrieval Systems, Richland, Washington	2a. Project No.: 94-D-407
Funded		2b. Construction

8. Project Description, Justification and Scope

The Initial Tank Retrieval Systems (ITRS) project will provide mixing and pumping systems for retrieval of radioactive wastes from ten of Hanford's 28 double-shell tanks (DST). The contents of these tanks consist of supernatant liquids and settled solids, which must be mixed prior to transferring the waste to treatment facilities or alternative storage. The ITRS will provide systems to mobilize settled solids and transfer wastes out of the tanks to provide feed to future processing plants, and allow near-term consolidation of tank wastes to restore useable DST storage capacity. This DST storage space is required to allow safe storage of alternate waste streams, such as waste from the single-shell tanks. Additionally, the dilution and waste removal capabilities provided by ITRS will remediate the flammable gas issue in several of the flammable gas watch list DSTs.

Existing equipment installed in the DSTs only allows the removal and transfer of supernatant liquids, and is incapable of suspending and removing the settled solids. Without the waste mixing, dilution, and removal functions provided by ITRS there will be no ability to provide feed to future processing plants, consolidate waste solids, or remediate flammable gas issues.

The typical retrieval system for the ten tanks consists of 300 horsepower mixer pumps to mobilize solids in the tank and a transfer system for removal of the tank contents. Tank internal components, such as thermocouple trees, will be replaced with higher strength equipment to withstand the forces induced by the mixer pumps. Monitoring and control systems will be installed to measure performance of the mixer pumps and tank operations. Remote decontamination equipment and disposable containment equipment will be utilized for removal and disposal of tank components.

The FY 1999 budget request will be used for initial construction of the first three of ten retrieval systems, design work on four retrieval systems, and long-lead equipment procurement for five systems. Included in the FY 1999 request is funding for engineering and inspection during construction, health physics field support, project management, and contingency.

1. Title and Location of Project:	Initial Tank Retrieval Systems, Richland, Washington	2a. Project No.: 94-D-407
Funded		2b. Construction

9. Details of Cost Estimate e/ f/

	<u>Item Cost</u>	<u>Total Cost</u>
a. Design Phase		\$ 32,770
1. Preliminary and Final Design costs, (Design, Drawings, and Specifications)	\$ 25,520	
2. Design Management costs @ 28.4 percent of 9.a.1	7,250	
b. Construction Phase		133,730
1. Land and Land Rights	0	
2. Buildings and Improvements to Land	1,380	
3. Specialized Equipment	79,590	
4. Other (major utilities/comp items, specialized facilities, etc.)	24,570	
5. Removal cost less salvage	5,630	
6. Inspection, design, and project liaison, testing, checkout, and acceptance	10,910	
7. Construction Management @ 8.7 percent of 9.b	11,650	
c. Contingencies at approximately 21 percent of above costs		<u>35,500</u>
1. Design Phase	5,630	
2. Construction Phase	29,870	
d. Total Line-item costs (Section 11.a.1.)		\$202,000
e. LESS: Non-Agency contribution (Define in Section 12)		<u>0</u>
f. Total Agency Requirements (TEC)		<u>\$202,000</u>

e/ Estimate is based on the Title I design including supplements 1 and 2 dated October 1995.

1. Title and Location of Project:	Initial Tank Retrieval Systems, Richland, Washington	2a. Project No.: 94-D-407
Funded		2b. Construction

f/ Escalation rates were calculated from the February 1995 update of the economic escalation price change indices for DOE construction projects as published by the "Office of Infrastructure Acquisition, FM-50."

1. Title and Location of Project:	Initial Tank Retrieval Systems, Richland, Washington	2a. Project No.: 94-D-407
Funded		2b. Construction

10. Method of Performance

The Initial Tank Retrieval Systems will be managed for Richland by the Project Hanford Management Contractor (PHMC).
The PHMC will have responsibility for project management.

1. Title and Location of Project: Initial Tank Retrieval Systems,
Richland, Washington

2a. Project No.: 94-D-407

2b.

Construction

Funded

11. Schedule of Project Funding and Other Related Funding Requirements

	<u>Prior Years</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>Outyears</u>	<u>Total</u>
a. Total project costs (Agency Requirements)						
1. Total facility costs						
a) Design (Section 9.a & section 9.c.1)	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
b) Construction (Section 9.b & Section 9.c.2) . . .	6,319	6,231	15,200	32,860	141,390	202,000
c) Plant, Engineering, and Design (PE&D)	0	0	0	0	0	0
d) Operating expense funded equipment	0	0	0	0	0	0
e) Inventories	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total facility costs (Federal and Non-Federal) .	\$ 6,319	\$ 6,231	\$ 15,200	\$ 32,860	\$ 141,390	\$ 202,000
2. Other project costs						
a) R&D necessary to complete project	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
b) Conceptual design costs	1,609	0	0	0	0	1,609
c) Decontamination & Decommissioning (D&D)	0	0	0	0	0	0
d) NEPA documentation costs	10	0	0	0	0	10
e) Other ES&H costs	0	0	0	0	0	0
f) Other project related costs (Define in Sec. 12) .	<u>4,086</u>	<u>884</u>	<u>1,480</u>	<u>1,150</u>	<u>17,881</u>	<u>25,481</u>
g) Total other project costs	<u>\$ 5,705</u>	<u>\$ 884</u>	<u>\$ 1,480</u>	<u>\$ 1,150</u>	<u>\$ 17,881</u>	<u>\$ 27,100</u>
Total project costs	\$ 12,024	\$ 7,115	\$ 16,680	\$ 34,010	\$ 159,271	\$ 229,100
3. LESS: Non-Agency contribution (define Federal vs non-Federal)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Agency total project cost (TPC)	<u>\$ 12,024</u>	<u>\$ 7,115</u>	<u>\$ 16,680</u>	<u>\$ 34,010</u>	<u>\$ 159,271</u>	<u>\$ 229,100</u>

1. Title and Location of Project:	Initial Tank Retrieval Systems, Richland, Washington	2a. Project No.: 94-D-407
Funded		2b. Construction

11. Schedule of Project Funding and Other Related Funding Requirements (cont'd)

b. Related Lifecycle costs (estimated life of project)	
1. Annual facility operating costs (staff, utilities, etc.)	\$ n/a
2. Annual facility maintenance/repair costs	n/a
3. Annual programmatic effort related to facility	0
4. Other Annual Costs (define in Section 12)	<u>0</u>
Total Annual related life cycle costs	<u>\$ n/a</u>

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements

- a. Total project funding
 - 1. Total facility costs
 - a) Line-Item -- \$202,000,000; these funds will be used for design, procurement, construction, and project management.
 - b) Plant engineering & design -- No narrative required.
 - c) Operating expense funded equipment -- No narrative required.
 - d) Inventories -- No narrative required.
 - 2. Other project costs
 - a) R&D necessary to complete construction -- No narrative required.
 - b) Conceptual design -- was completed at an approximate cost of \$1,609,000.
 - c) Decontamination & Decommissioning (D&D) -- No narrative required.
 - d) NEPA documentation -- The W-211 National Environmental Policy Act (NEPA) documentation of \$10,000 is integrated into the Hanford Defense Waste EIS, SIS-EIS, and TWRS-EIS.
 - e) Other project related costs -- \$25,481,000; These costs include project definition, operating contractor support; site characterization, configuration verification, and startup activities.

1. Title and Location of Project:	Initial Tank Retrieval Systems, Richland, Washington	2a. Project No.: 94-D-407
Funded		2b. Construction

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements (cont'd)

- b. Related annual funding
 - 1. Facility operating costs -- Not applicable.
 - 2. Facility maintenance and repair costs -- Not applicable.
 - 3. Programmatic operating expenses directly related to the facility -- No narrative required.
 - 4. Capital equipment requirements for programmatic support --
 - 5. GPP or other construction related to programmatic effort -- No narrative required.
 - 6. Utility costs -- Negligible.
 - 7. Other costs -- No narrative required.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

SITE/PROJECT COMPLETION

1. Title and Location of Project:	Americium/Curium Vitrification, Savannah River Site, South Carolina	2a. Project No.: 96-EXP	PBS# SR-NM01
		2b. Operating Expense Funded	

SIGNIFICANT CHANGES

- The significant changes to the Research and Development estimates necessary to complete the project is based upon difficulties in adapting a commercial melter to produce stable glass with a highly radioactive aqueous feed. The impacts to the current baselines are currently under review.
- A reduction in the FY 1998 funding is a significant change. Baseline impacts are under review.

DEPARTMENT OF ENERGY
FY 1999 CONGRESSIONAL BUDGET REQUEST
(Changes from the FY 1998 Congressional Budget Request are denoted by a vertical line in the left margin.)

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
(Tabular dollars in thousands. Narrative material in whole dollars.)

SITE/PROJECT COMPLETION

1. Title and Location of Project: Americium/Curium Vitrification, Savannah River Site, South Carolina		2a. Project No.: 96-EXP a/ PBS# SR-NM01 2b. Operating Expense Funded	
	<u>Preliminary Schedule</u>	<u>Title I Baseline</u>	<u>Current Baseline Schedule b/</u>
3a. Date A-E Work Initiated: 2nd Qtr. FY 1996	2nd Qtr. FY 1996		2nd Qtr. FY 1996
3b. A-E Work (Titles I & II) Duration:	12 months	30 months	30 months
4a. Date Physical Construction Starts:	3rd Qtr. FY 1996	3rd Qtr. FY 1996	3rd Qtr. FY 1996
4b. Date Phase I Construction Ends: 2nd Qtr. FY 2000	2nd Qtr. FY 1998		2nd Qtr. FY 2000
	<u>Preliminary Estimate</u>	<u>Title I Baseline</u>	<u>Current Baseline Estimate</u>
5. Total Estimated Cost (TEC) --	\$ 29,230	\$ 34,044	\$ 34,044
6. Total Project Costs (TPC) --	\$ 40,500	\$ 60,278	\$ 60,278

- a/ It should be noted that this project is justified as an operating expense funded project data sheet prepared to comply with the reviewed DOE Order 5100.3.
- b/ Current baseline schedule does not reflect changes due to the FY 1998 funding adjustment and an increase in the Research and Development program. These impacts are currently under review.

1. Title and Location of Project:	Americium/Curium Vitrification, Savannah River Site, South Carolina	2a. Project No.: 96-EXP 2b. Operating Expense Funded
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7. Financial schedule (Federal Funds)

<u>Fiscal Year</u>	<u>Appropriation c/</u>	<u>Adjustments</u>	<u>Obligations</u>	<u>Costs</u>
1996	\$ 6,355	\$ 0	\$ 6,355	\$ 6,355
1997	5,640	0	5,640	5,640
1998	3,559	0	3,559	3,559
1999	10,873	0	10,873	10,873
Outyears	7,617	0	7,617	7,617

c/ It should be noted that this project is justified as an operating expense funded project data sheet prepared to comply with the reviewed DOE Order 5100.3.

8. Project Description, Justification and Scope

This project proposes the vitrification of the F-Canyon americium/curium (Am/Cm) solutions into borosilicate glass via a melter to be installed in the Multi-Purpose Processing Facility (MPPF) of the 221 F-Canyon. This project would provide for the development and design of the vitrification process, the design of the associated building infrastructure interfaces and the construction and installation of the equipment. This project would provide for the refurbishing of the existing MPPF facility to accommodate the new equipment.

Approximately 15,000 liters of solution containing the valuable isotopes 243 Am and 244 Cm have been accumulated in the 221 F-facility from recovery campaigns that began in the mid-1970s. These solutions have been identified in several documents as a vulnerability and as such require stabilization. These documents include the Defense Nuclear Facilities Safety Board Recommendation 94-1 and the Plutonium Environment, Safety and Health Vulnerability Assessment Report. There is no reasonable method to transport this material in solution from outside of F-Canyon. Due to intense radiation source of the material, a heavily shielded, remotely operated facility is required for handling and processing. There is no existing operable process to

1. Title and Location of Project:	Americium/Curium Vitrification, Savannah River Site, South Carolina	2a. Project No.: 96-EXP 2b. Operating Expense Funded
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8. Project Description, Justification and Scope (Continued)

convert this solution to a solid form for safe storage or transport to the National Heavy Element and Advanced Neutron Sources (ANS) Programs at the Oak Ridge National Laboratory. An analysis of several alternatives has resulted in this project to develop the process to stabilize the solutions by vitrification into a glass form. The facility most suitable for installing vitrification equipment to stabilize this solution is the MPPF.

| The FY 1999 funds will be used to complete design for this project, procure materials, and continue with construction.

1. Title and Location of Project:	Americium/Curium Vitrification, Savannah River Site, South Carolina	2a. Project No.: 96-EXP
		2b. Operating Expense Funded

9. Detail of Cost Estimate

	<u>Item Cost</u>	<u>Total</u>
<u>Cost</u>		
a. Design Phase		\$ 10,360
1. Preliminary and Final Design costs, (Design, Drawings, and Specifications)	\$ 9,186	
2. Design management costs @ 12.8 percent of 9.a.1	1,174	
b. Construction Phase		12,640
1. Land and Land Rights	0	
2. Buildings & Improvements to Land	0	
3. Specialized Equipment	0	
4. Other (major utilities/comp items, specialized facilities, etc.)	0	
5. Removal costs less salvage	12,640	
6. Inspection, design and project liaison, testing, checkout and acceptance	0	
7. Construction Management @ 0 percent of 9.b	0	
c. Contingencies at approximately 48 percent of above costs		<u>11,044</u>
1. Design Phase	7,400	
2. Construction Phase	3,644	
d. Total line item cost (section 11.a.1)		34,044
e. LESS: Non-Agency contribution (Define in Section 12)		<u>0</u>
f. Total Agency Requirement (TEC)		<u><u>\$ 34,044</u></u>

The DOE escalation rates (percent per year) used for this estimate are as follows:

Fiscal Year FY 1997 FY 1998 FY 1999

1. Title and Location of Project:	Americium/Curium Vitrification, Savannah River Site, South Carolina	2a. Project No.: 96-EXP	2b. Operating Expense Funded
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Escalation	3.0	3.1	3.0
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1. Title and Location of Project: Americium/Curium Vitrification, Savannah River Site, South Carolina	2a. Project No.: 96-EXP 2b. Operating Expense Funded
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10. Method of Performance

Design and construction shall be performed by the Management and Operating (M&O) contractor or a subcontractor under the direction of the M&O contractor.

11. Schedule of Project Funding and Other Related Funding Requirements

	Previous Years	FY 1997	FY 1998	FY 1999	Outyears	TOTAL
a. Total project costs (Agency Requirements)						
1. Total facility costs						
(a) Design (Section 9.a & Section 9.c.1)	\$ 6,255	\$ 3,235	\$ 2,550	\$ 4,470	\$ 1,250	\$17,760
(b) Construction (Section 9.b & Section 9.c.2)	100	2,405	1,009	6,403	6,367	16,284
(c) Plant, Engineering and Design (PE&D)	0	0	0	0	0	0
(d) Operating expense funded equipment	0	0	0	0	0	0
(e) Inventories	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total facility costs (Federal and Non-Federal) .	\$ 6,355	\$ 5,640	\$ 3,559	\$ 10,873	\$ 7,617	\$34,044
2. Other project costs						
(a) R&D necessary to complete project	\$ 2,500	\$ 6,330	\$ 6,121	\$ 0	\$ 0	\$14,951
(b) Conceptual design costs	300	0	0	0	0	300
(c) Decontamination and Decommissioning (D&D)	0	0	0	0	0	0
(d) NEPA documentation costs	100	0	0	0	0	100
(e) Other ES&H costs	0	0	0	0	0	0
(f) Other project related costs (Define in Section 12)	<u>1,440</u>	<u>1,845</u>	<u>2,036</u>	<u>3,199</u>	<u>2,363</u>	<u>10,883</u>
(g) Total other project costs	<u>\$ 4,340</u>	<u>\$ 8,175</u>	<u>\$ 8,157</u>	<u>\$ 3,199</u>	<u>\$ 2,363</u>	<u>\$26,234</u>
Total project costs	<u>\$10,695</u>	<u>\$13,815</u>	<u>\$11,716</u>	<u>\$14,072</u>	<u>\$ 9,980</u>	<u>\$60,278</u>
3. LESS: Non-Agency contribution (define Federal vs non-Federal)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

1. Title and Location of Project:	Americium/Curium Vitrification, Savannah River Site, South Carolina	2a. Project No.:	96-EXP
		2b. Operating Expense Funded	

Agency total project costs (TPC)	<u>\$10,695</u>	<u>\$13,815</u>	<u>\$11,716</u>	<u>\$14,072</u>	<u>\$ 9,980</u>	<u>\$60,278</u>
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1. Title and Location of Project: Americium/Curium Vitrification, Savannah River Site, South Carolina	2a. Project No.: 96-EXP 2b. Operating Expense Funded
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11. Schedule of Project Funding and Other Related Funding Requirements (Continued)

b. Related Lifecycle costs (estimated life of project)	
1. Annual facility operating costs (staff, utilities, etc.)	\$ 2,400
2. Annual facility maintenance/repair costs	100
3. Annual programmatic effort related to facility	0
4. Other Annual Costs (define in Section 12)	<u>100</u>
Total Annual related lifecycle costs	<u>\$ 2,600</u>

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements

- a. Total project funding
 - 1. Total facility costs
 - (a) Line item--Narrative not required.
 - (b) PE&D--None.
 - (c) Operating expense funded equipment--None.
 - (d) Inventories--None.
 - 2. Other project costs
 - (a) R&D necessary to complete construction--Includes cost associated with the development of the vitrification process (\$14,951,000).
 - (b) Conceptual design--The conceptual design was completed in November 1995 at a cost of \$300,000.
 - (c) Decontamination and Decommissioning (D&D)--None.
 - (d) NEPA documentation--Includes cost associated in complying with NEPA 1969 (\$100,000).
 - (e) Other project related costs--Includes all costs associated with the process development, training, procedures and facility support during construction of the project including Radcon protection (\$10,883,000).

1. Title and Location of Project:	Americium/Curium Vittrification, Savannah River Site, South Carolina	2a. Project No.: 96-EXP
		2b. Operating Expense Funded

12. Narrative Explanation of Total Project Funding and Other Related Funding Requirements (Continued)

b. Related annual costs

1. Facility operating costs--The operating life of this facility will be approximately 6 months. The staffing costs associated with this are expected to be \$2,400,000 (12 FTEs).
2. Facility maintenance and repair costs--The costs for maintenance are expected to be approximately \$100,000.
3. Programmatic operating expenses directly related to the facility--None.
4. Capital equipment requirements for programmatic support--None.
5. GPP or other construction related to programmatic effort--None.
6. Utility costs--None.
7. Other costs--Costs will not exceed \$100,000.